Cherokee Verb Classes, Language Revitalization, and Second Language Pedagogy

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ABSTRACT

The North American indigenous language Cherokee is an understudied and endangered language. Cherokee is the only living language left in the Southern branch of the Iroquoian language family. Languages of the Northern Iroquoian branch include Mohawk, Seneca, and Cayuga (Montgomery-Anderson 2015:3). Unfortunately, all three of these languages are also severely endangered (UNESCO). Due to generational gaps between fluent speakers of the language and children growing up in Cherokee communities, most children no longer speak Cherokee as a native language. Second language learners are important to the language revitalization efforts of Cherokee, but a lack of educational materials renders the teaching process difficult. One point of difficulty is the teaching of verbs. Research on Cherokee verbs by authors such as William Cook 1979 and Duane King 1975 has been limited to linguistic descriptions of verb structures that are difficult for second language learners to understand. My goal has been to categorize Cherokee verbs in a way that is easy for second language learners to understand and utilize. I used German strong verb classes as a model for what I wanted the Cherokee classes to look like and the information I wanted them to present. I analyzed a dataset of over 300 Cherokee verbs from which I identified patterns and separated the verbs into different classes based on those patterns. I present eleven verb classes for Cherokee, explain how they differ from the verb classes of Cook and King, and discuss how they could be used in the classroom. This research has the potential to impact students and teachers alike, by making Cherokee a more accessible language for everyone.

SECTION 1: INTRODUCTION

The diminishing number of native speakers of Cherokee makes the language susceptible to language death and in need of language revitalization. The lack of first language speakers in younger generations leaves Cherokee communities in great need of second language learners and second language teachers. Cherokee teachers often have no materials, or only limited materials, with which to teach the grammar of the language. Linguistic research on Cherokee contributes to the creation of teaching materials, but many aspects of the language have not yet been studied. One area of little research is that of verb inflections. Cherokee verbs are inflected to show tense and aspect, among other things. They take suffixes that identify them as belonging to one of the five categories that express tense and aspect: the Present Continuous, the Incompletive, the Immediate, the Completive, and the Infinitive. The ability to understand how verbs are inflected in each category is crucial to the amount of progress second language learners can make in learning to comprehend and produce Cherokee words and phrases. It is problematic for both teachers and students not to have a system that identifies how to inflect verbs.

I recorded over 300 verbs and their inflections from Durbin Feeling's *Cherokee-English Dictionary* (1975). I saw patterns in how certain verbs were inflected and I grouped together verbs with similar patterns. My analysis resulted in the creation of eleven Cherokee verb classes. Each class has a unique pattern that describes how the verbs in that class are inflected. A verb is identified as belonging to a certain class by the phonological shape of the final syllable of its root. The simplicity of this system makes it accessible to second language learners with no prior knowledge of linguistics. It also allows instructors of Cherokee to teach verb inflections in a simple way. Learners can use these verb classes in order to quickly identify which suffixes a verb takes without having to guess and without having to memorize each individual suffix for

each verb. This is expected to result in less processing time, better execution, and more effective learning.

Accessibility is crucial to the instruction of Cherokee. Teachers need access to proper materials with which they can teach the grammar of the language. The creation of those materials will result in the effective teaching and learning of Cherokee. New Cherokee speakers will provide new Cherokee teachers for the future. This will result in the growth of Cherokee second language courses being taught in schools, inside and outside of Cherokee communities. The presence of Cherokee in schools will build new language communities and contribute to the normalization of the language. These are several ways in which the research done on Cherokee can contribute to its language revitalization; researching an endangered language like this one is instrumental to the amelioration of the language instruction, as well as to the revitalization of the language.

SECTION 2: THE STRUCTURE OF A CHEROKEE VERB

Verbs are the most inflected part of speech in Cherokee (Montgomery-Anderson 2015:51). They take several prefixes and suffixes that convey additional semantic information about the verb's event; for example, information about the event's participants and about the event's place in time. In its most minimal form, a verb will consist of one pronominal prefix, the verb root, and one stem suffix. The verb root gives the meaning of the verb and cannot be reduced to a smaller form. The stem suffix and the verb root together make up the verb stem. There are five types of stem suffixes that can attach to the verb root; they express both tense and aspect. Tense is a "grammaticalized expression of location in time" (Comrie 1985:9). In English, the two phrases *he stole* and *he steals* differ from each other in tense. Aspects, on the other hand, "are different ways of viewing the internal temporal constituency of a situation" (Comrie 1976:3). Therefore, the two phrases *he steals* and *he is stealing* do not differ in tense but do differ in aspect. Each sentence's aspect explains the duration of time in which the event, stealing, is taking place. *He steals* is in the present tense and the simple aspect. The simple present denotes that an action occurs habitually; it is an action that happens frequently or infinitely (Comrie 1976:11). *He is stealing* is also in the present tense but has a progressive aspect, which denotes an ongoing action that is in the process of taking place but is temporary and may change in the future (Comrie 1976:11). It is difficult to tease apart tense and aspect in Cherokee because many stem suffixes express a combination of the two categories. A verb in its most minimal form is given below. The examples I give in Cherokee are written in English orthography. The sounds are pronounced, for the most part, like they are in English. Some Cherokee speakers pronounce "s" as a voiceless postalveolar fricative instead of a voiceless alveolar fricative. I use the letter "v" to denote a nasalized schwa sound, which is one of the Cherokee vowels.

(1) ganosgiʔa “He is stealing.”

ga	-nosgi	-ʔa
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	steal	Present Continuous

These are the foundational elements of a Cherokee verb. The next sections will expound upon these elements and will discuss the optional affixes that can be added onto this foundation.

2.1 Prepronominal Prefixes

Up to two prepronominal prefixes may precede a verb’s pronominal prefix. Prepronominal prefixes enhance the meaning of a verb by presenting information about speaker and object locations, as well as information about the action of a verb, such as motion or iteration. Most verbs have the option to take a prepronominal prefix but do not. Some verbs take lexically specific prepronominal prefixes, such as the verb below, meaning “to count.” This verb takes the distributive prefix, which indicates that the object of the verb is plural.

(2) degasehiha “He is counting them.”

de	-ga	-sehi	-ha
Prepronominal Prefix	Pronominal Prefix	Root	Stem Suffix
distributive	3rd person sg.	count	Present Continuous

The other types of prepronominal prefixes are the counterfactual, positive, translocative, partitive, cislocative, iterative, and negative prefixes (Cook 1979:54). Few verbs in my dataset take prepronominal prefixes, so I will not discuss them any further.

2.2 Pronominal Prefixes

A pronominal prefix is the first obligatory part of a Cherokee verb. Pronominal prefixes encode information about the verb's subject and/or object, including grammatical person, number, and clusivity. Cherokee, like English, has three grammatical persons: first, second, and third. Unlike English, there are three number distinctions in Cherokee: singular, dual, and plural. First person nonsingular forms are distinguished from each other based on clusivity. The first person nonsingular inclusive form includes the speaker and the interlocutor(s). The first person nonsingular exclusive form includes the speaker and a referent but excludes the interlocutor(s). The first person singular inclusive form includes only the speaker. There is no first person singular exclusive form because it would be impossible to exclude the speaker.

Cherokee verbs fall into one of two categories: Set A or Set B. Montgomery-Anderson 2015 describes Set A verbs as transitive verbs and Set B verbs as intransitive, but this may not be the whole picture. It may be more appropriate to think of Set A verbs as verbs with non-experiencer subjects and Set B verbs as verbs with experiencer subjects. This is simply a hypothesis; further research is warranted in order to determine if it is correct or not. Some examples of Set A and Set B verbs are listed below.

Table 2.2 A: Examples of Set A versus Set B verbs

Set A	**English**	**Set B**	**English**
wooniha	to speak	oohiyuha	to believe
uutiha	to snow	yoosiha	to be hungry
aaʔi	to walk	ehisdaneha	to hurt
oogisga	to smoke	eeluugiisgi	to worry
goliiyeʔa	to examine	aduuliha	to want

Each category has its own set of prefixes: Set A verbs take Set A prefixes, and Set B verbs take Set B prefixes. The Set A and Set B paradigms are given below. They are taken from Montgomery-Anderson's *Cherokee Reference Grammar* (2015). Two of the same vowel

represents a long vowel. The third person singular has two forms. “While it is not entirely predictable, the appearance of third person *ga-* instead of *a-* has certain general characteristics. One generalization can be made about its use: *ga-* appears on all Set A stems that start with the sounds /o/, /u/, or /v/” (Montgomery-Anderson 2015:40).

Table 2.2 B: Set A Pronominal Prefixes (Montgomery-Anderson 2015:39)

Person Reference	**Singular**	**Dual**	**Plural**
First Person Inclusive	ji-	iinii-	idii-
First Person Exclusive	----------	oosdii-	oojii-
Second Person	hi-	sdii-	iijii-
Third Person	a-, ga-	anii-	anii-

Table 2.2 C: Set B Pronominal Prefixes (Montgomery-Anderson 2015:46)

Person Reference	**Singular**	**Dual**	**Plural**
First Person Inclusive	agi-	ginii-	iigii-
First Person Exclusive	----------	ooginii-	oogii-
Second Person	ja-	sdii-	iijii-
Third Person	uu-	uunii-	uunii-

Many Set A verbs undergo prefix shift in the Completive and Infinitive stem suffix categories. If this is the case, then the verb will take Set B, instead of Set A, pronominal prefixes in the Completive and the Infinitive categories (Montgomery-Anderson 2015:53). An example of a verb that undergoes prefix shift is below:

Table 2.2 D: Example of Prefix Shift (Feeling 1975:51)

Stem Suffix Category	**Cherokee**	**English**
PRC	asgolvdiʔa	He’s erasing it.
INC	asgolvdisgoʔi	He was erasing it.
IMM	asgolvda	He (just) erased it.
CMP	usgolvdvʔi	He erased it.
INF	usgolvdisdi	for him to erase

2.3 Stem Suffixes

Stem suffixes specify information about the tense and aspect of a verb. Cook 1979, King 1975, and Montgomery-Anderson 2015 refer to this type of suffix as the “aspect suffix.” I have termed it the “stem suffix” because it is considered part of the verb stem, and it is not the only

suffix in Cherokee that gives information about aspect. Stem suffixes attach directly to the verb root. There are five stem suffixes in Cherokee: the Present Continuous, Incompletive, Immediate, Completive, and Infinitive. Additional suffixes may attach themselves to the verb stem, so directly following the stem suffix, in two out of the five categories. These additional suffixes are termed "final suffixes." Final suffixes add information about aspect. Below is an explanation of each stem suffix category with examples of the forms these suffixes can take.

The Present Continuous (PRC) can only express actions in the present tense; its aspect indicates an ongoing action. It cannot take any additional suffixes. It takes the form of [ha], [ʔa], or [sga]. Some authors, such as Cook 1979 and King 1975, define [a] as a final suffix. Montgomery-Anderson 2015 does not and I follow Montgomery-Anderson; therefore, I will take it as part of the Present Continuous stem suffix.

(3) degasehiha "He is counting."

de	-ga	-sehi	-ha
Prepronominal Prefix	Pronominal Prefix	Root	Stem Suffix
distributive	3rd person sg.	count	Present Continuous

(4) ganosgiʔa "He is stealing."

ga	-nosgi	-ʔa
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	steal	Present Continuous

(5) adananesvhvsga "He is shopping."

a	-dananesvhv	-sga
Pronominal Prefix	Root	Stem Suffix

3rd person sg.	shop	Present Continuous

The Incompletive (INC) describes actions that are not finished. It must take one of four additional suffixes: the habitual, the experienced past, the non-experienced past, or the progressive future. This is an important distinction from the Present Continuous stem suffix, which cannot take any additional suffixes. The Incompletive can express unfinished actions in any tense. It takes the form of [h] or [sg].

(6) agoliyesgoʔi "He was reading."

a	-goliye	-sg	-oʔi
Pronominal Prefix	Root	Stem Suffix	Final Suffix
3rd person sg.	read	Incompletive	Habitual Suffix

(7) adloyihoʔi "He was crying."

a	-dloyi	-h	-oʔi
Pronominal Prefix	Root	Stem Suffix	Final Suffix
3rd person sg.	cry	Incompletive	Habitual Suffix

The Immediate (IMM) expresses actions that have taken place in the recent past, or actions that will, or might, take place in the immediate future. When used with the prepronominal irrealis prefix *yi-*, the Immediate forms a command. Verbs in the Immediate can also convey the meaning of having the ability to do something (Montgomery-Anderson 2015:71). It cannot take any additional suffixes. The Immediate either has a null form, or it takes the form of [a], which is often preceded by an additional vowel, and a voiced alveolar nasal, a voiced velar stop, or a voiced alveolar approximant. It can also end in [i].

(8) gadalugivga "He (just) plowed."

ga	-gadalugi	-vga
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	plow	Immediate

(9) awoladagi "He (just) breathed."

a	-wolade	-agi
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	breathe	Immediate

The Completive (CMP) describes actions that are finished. It must take one of five additional suffixes, some of which are identical to the ones that can be attached to the Incompletive. The additional suffixes are: the experienced past, the non-experienced past, the progressive future, the future command, and the completive future. The Completive can express actions in the past and future tenses and, like the Immediate, it can also be used to express commands. Unlike the Immediate, the Completive does not need the irrealis prefix to form a command; instead, the additional future command suffix does that (Montgomery-Anderson, 2015:74). The Completive takes a null form, or takes one of several forms, including [s], [h], [ʔ], [n], and [l]. In certain cases, a voiceless glottal fricative precedes the voiced alveolar nasal and the voiced alveolar approximant.

(10) asgosvʔi "He dug."

a	-sgo	-s	-vʔi
Pronominal Prefix	Root	Stem Suffix	Final Suffix
3rd person sg.	dug	Completive	Experienced Past

(11) adanuteyolvʔi "He twisted it."

a	-danuteyo	-l	-vʔi
Pronominal Prefix	Root	Stem Suffix	Final Suffix
3rd person sg.	twist	Completive	Experienced Past

The Infinitive (INF) does not express tense or aspect. It cannot take additional suffixes. The Infinitive is realized as [sdi], [di], or [hdi], and sometimes [tdi].

(12) agvhalidi "for him to cut it"

a	-gvhali	-di
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	cut	Infinitive

(13) atalesdi "for him to drill"

a	-tale	-sdi
Pronominal Prefix	Root	Stem Suffix
3rd person sg.	drill	Infinitive

The main object of my research has been to look at the characteristics of the different forms of these stem suffixes and to find patterns that could translate to Cherokee verb classes. This research will be discussed in future sections.

2.4 Derivational Suffixes

Derivational suffixes are separate from the additional suffixes that attach to the Incompletive and Completive stem suffixes. They are termed "derivational suffixes" by Montgomery-Anderson (2015:383). Montgomery-Anderson uses this term differently from the general linguistic term "derivational suffix." In his sense of the term, derivational suffixes do not

create new words by changing a word's part of speech, but alter the meaning of a word in a different way. They add onto the meaning of a verb by specifying information about the verb's aspect; for example, the repetitive derivational suffix can be attached to any verb in order to demonstrate that an action is repeated. Also included in the category of derivational suffixes are valency-increasing suffixes. Valency-increasing suffixes increase the number of arguments selected by the predicate. The derivational suffixes are the duplicative, accidental, terminative, pre-incipient, ambulative, movement, purpose, causative, and applicative suffixes. Out of the these, the two valency-increasing suffixes are the causative and the applicative. The causative suffix causes an intransitive verb to become transitive, while the applicative suffix increases the number of objects being acted upon by the subject of a verb (Montgomery-Anderson 2015:400). Derivational suffixes can attach to any verb in order to change something about its meaning. A verb is identified as having a derivational suffix if it takes certain forms in each of the five stem suffix categories. This is discussed in greater detail in the next section.

SECTION 3: VERB ANALYSIS

I began my analysis of Cherokee verbs by looking at the research that had previously been done on the subject. Both William Cook and Duane King wrote dissertations on the structure of North Carolina Cherokee in the 1970s. Each author wrote about the structure of Cherokee verbs and how they pattern in each of the five stem suffix categories mentioned above. They both created verb classes in order to explain these patterns; however, Cook's and King's classes differ from one another in terms of number of classes and in terms of verb groupings. Additionally, both authors' motivations for creating their verb classes were different from my own. Cook and King sought to describe the structure of Cherokee for linguists without much regard to how that structure might be taught in the classroom. On the other hand, I sought to create Cherokee verb classes that were simple enough for a second language learner of Cherokee with no background in linguistics to learn and utilize. Because of the discrepancies between Cook's and King's classes, as well as the different motivations behind my work compared to theirs, I decided to collect my own data with which I could create my own verb classes rather than work off of what Cook and King had already done. Below are two charts that show Cook's and King's verb classes. A colon indicates that a sound is long. An accent mark above a vowel denotes tone. The pound symbol (#) indicates that there are no phonemes following the last phoneme of the stem suffix form. An asterisk (*) indicates that the last phoneme in the verb root is replaced by the initial vowel of the stem suffix form. The "at" symbol (@) represents indicates that multiple final phonemes in the verb root are being replaced.

Table 3A: Cook's Cherokee Verb Classes (Cook 1979:98)

Class	Root Finals	PRC	INC	IMM	CMP	INF
A1	t, k, y, ts	-iʔ-	-ʔíhsk-	-a	-ʔ-	-ʔihst-
A2	t, k, l, w	-iʔ-	-iʔsk-	-aʔka	-aʔn-	-oʔt-
A3	hs, st, ht, ʔt	-ih-	-ihsk-	-a	-ahn-	-oht-
A4	t, l, n, y, ts, th, hs	-ih-	-ihsk-	-a	-vh-	-vht-
B1	e	-h-	-hsk-	-v:li	-h-	-hst-
B2	e	-ʔ-	-ʔsk-	-a	-ʔ-	-ʔst-
B3	o:	-ʔ-	-sk-	-tsa	-ʔ-	-st-
B4	v:	-ʔ-	-sk-	-na	-s-	-st-
B5	i:	-ʔ-	-sk-	-ø	-s-	-st-
C1	v, á, ó, u	-hsk-	-hsk-	-hi	-hs-	-hihst-
C2	a, i	-hsk-	-hsk-	-ø	-hs-	-hst-
C3	ya, la, na, ha	-hsk-	-hsk-	-ø	-h-	-hst-
C4	ʔn	-hsk-	-hsk-	-ʔka	-ø-	-ʔt-
C5	hn	-hsk-	-hsk-	-ʔka	-ø-	-ht-
D1	é	-h-	-hsk-	-v:li	-hl-	-ht-
D2	ó, v	-hih-	-hih-	-ha:ʔka	-hl-	-hst-
D3	é, ó	-hih-	-hih-	-:ka	-hl-	-hst-
D4	l, n, y	-hih-	-hih-	-hka	-hl-	-hst-
D5	l, n, a:, i:, v:	-ʔih-	-ʔih-	-ʔka	-ʔl-	-ʔst-
E	e:, o:, i:, v:, h, ʔ	-k-	-k-	-ki	-ts-	-ihst-
F	h, n, l, y, ʔ, ts, ths	-i	-i:s-	no entry	no entry	no entry
G	y, l, h, ʔ, hl	-ø-	-ø-	no entry	no entry	no entry

Table 3B: King's Cherokee Verb Classes (King 1975:78-79)

Class	Root Finals	PRC	INC	IMM	CMP	INF
Ia	i	-ʔ-	-sk-	-ø	-ʔs-	-ʔst
Ib	o	-ʔ-	-sk-	-tsa	-ʔ-	-ʔst
Ic	v	-ʔ-	-ʔsk-	-na	-ʔ-	-ʔst
Id	e	-ʔ-	-sk-	-*a	-ʔ-	-ʔt
IIa	ye, le	-h-	-hsk-	-*a	-h-	-ht
IIb	ke, ʔye	-h-	-hsk-	-*v:li	-h-	-ht
IIc	he	-h-	-hsk-	-*v:li	-hl-	-ht
IIIa$_1$	vʔv	-hsk-	-hsk-	-ʔka	-*n-	-*t
IIIa$_2$	uhv, vhv, ohv	-hsk-	-hsk-	-ʔka	-*n-	-@ht
IIIa$_3$	ahv	-hsk-	-hsk-	-ʔka	-*n-	-@oht
IIIb	a	-hsk-	-hsk-	-ʔka	-n-	-*ø
IIIc$_1$	o, u, a	-hsk-	-hsk-	-hi	-hs-	-hihst
IIIc$_2$	i:w	-hsk-	-hsk-	-hi	-hs-	-hst
IVa	ht, ʔt, kt, st	-ih-	-ihsk-	-a	-han-	-oht
IVb	n, l, s, y, t, th, ts	-ih-	-ihsk-	-a	-vh-	-ht
Va	no entry	-iʔ-	-ihsk-	-a	-vʔ-	-ht
Vb	t, k, ts	-iʔ-	-ihsk-	-a	-ʔn-	-ihst
Vc	no entry	-iʔ-	-ihsk-	-a:ʔka	-aʔn-	-oʔt
VIa$_1$	hk	-ih-	-ih-	-ka	-il-	-st
VIa$_2$	h, ʔ	-ih-	-ih-	-ka	-l-	-st
VIIa$_1$	yo(l), yo	-hih-	-hih-	-haʔka	-hl-	-hst
VIIa$_2$	yo(l), yo	-hih-	-hih-	-ka	-hl-	-hst
VIIIa	e, o, u	-k-	-k-	-ʔki	-ʔts-	-ʔihst
VIIIb	h, ʔ	-k-	-k-	-ki	-ts-	-ihst
IXa	to	-h-	-h-	-*a	-ʔl	-*aʔst
IXb	to	-h-	-h-	no entry	no entry	no entry
X	c	-i#	-i:s-	-u:ʔka	-eʔs-	-vʔst
XI	no entry	no entry	no entry	-e:sti	-e:st-	-e:st

I collected my data from Durbin Feeling's 1975 *Cherokee-English Dictionary*. Feeling writes in the Oklahoma dialect of Cherokee, so that is the dialect that my results and my verb classes are written in. The North Carolina and Oklahoma dialects differ from each other phonologically with regards to voiced versus voiceless sounds. Below is a table showing certain sounds in Oklahoma Cherokee, and their equivalents in North Carolina Cherokee.

Table 3C: Sound Equivalents in Oklahoma and North Carolina Cherokee

Oklahoma Dialect	**North Carolina Dialect**
/g/	/k/
/j/	/ts/
/d/	/t/

An entry from Feeling's dictionary looks like the following (Feeling 1975:54):

(14) asladiʔa **DѲƜWᏗD** v.t. he's roping him, it

jisladiʔa **ᏂѲƜWᏗD**

usladvʔi **ᎤѲƜWᏫᎢ**

asladisgoʔi **DѲƜWᏗѲATᎠ**

hislada **ᏱѲƜWᏓ**

usladisdi **ᎤѲƜWᏗѲᏗ**

The first entry is the way the verb is listed in the dictionary. If the verb had any prepronominal prefixes it would be listed with those prefixes, but this verb does not. This first entry always takes either the Set A or Set B third person singular pronominal prefix; this verb is a Set A verb, so it takes the Set A pronominal prefix [a]. It is listed in the Present Continuous form and its definition is given in the Present Continuous. The two letters v.t. denote that this entry is a transitive verb. The two letters v.i. would denote an intransitive verb. Listed under the initial entry and definition are subsequent forms of the verb that are presented in the following order: the Present Continuous, the Completive, the Immediate, the Incompletive, and the Infinitive.

Each entry and sub-entry is also listed in the Cherokee syllabary. The first sub-entry is given in the Present Continuous form, like the initial entry, but it takes a first person singular pronominal prefix. The second sub-entry is given in the Completive form with a third person singular pronominal prefix. This prefix is given as [u], instead of [a] in this form, because this verb is one that undergoes prefix shift. Prefix shift causes Set A verbs to take Set B pronominal prefixes in their Completive and Infinitive forms. The third sub-entry is given in the Immediate form, with the Set A third person singular pronominal prefix. The fourth sub-entry is given in the Incompletive form, with the Set A second person singular pronominal prefix. Lastly, the fifth sub-entry is given in the Infinitive form, with the Set B third person singular pronominal prefix. The Infinitive form, like the Completive form, takes a Set B pronominal prefix because it is affected by prefix shift. For the sake of simplicity, when I list examples of verbs in each of the five forms I only use the third person singular pronominal prefix, whether it be Set A or Set B.

There are 705 verbs in Feeling's dictionary; I recorded 357 out of the 705 verbs. The format in which I recorded verbs looks like this:

Table 3D: Example of a Recorded Verb

Prepro	**Pro**	**Root**	**PRC**	**INC**	**IMM**	**CMP**	**INF**	**Gloss**
------	a	-suyv	-sga	-sg-	-ga	-n-	-di	to mix

In the column labeled "Prepro" I listed any prepronominal prefixes that the verb entry included; this verb does not take any prepronominal prefixes. In the column labeled "Pro," I recorded the verb's pronominal prefix as it was given in the very first entry. I recorded the root of the verb in the column labeled "Root." The next five columns are labeled according to the stem suffix category they correspond to. In those five columns, I recorded the forms this verb took in each of the five stem suffix categories. The last column, labeled "Gloss," is where I recorded the English meaning of the verb.

I did not record verb entries for which one or more of the five stem suffix forms was not listed. There are 82 such entries; they look like the following (Feeling 1975:20):

(15) ahileha DᎯᏧᏫ v.t. he has possession of a vehicle

ji?ileha ᏂTᏧᏫ

---

ahi?leho?i DᎯᏧᎮT

---

uhi?lvsdi ᎤᎯᏎᏫᎫᏗ

Additionally, I did not record verb entries for classificatory verbs. Classificatory verbs take distinctive forms in each of the five stem suffix categories "depending on the physical properties of the object" (Montgomery-Anderson 2015:82). "Cherokee has five categories of classificatory verbs indicating solid, liquid, living, long, and flexible items" (Montgomery-Anderson 2015:82). There are 76 entries of classificatory verbs in Feeling's dictionary. An example of a classificatory verb indicating a living object is given below. As the example shows, "an element /ka/ is part of the verbs with living objects" (Montgomery-Anderson 2015:84).

(16) gakahiya?a ᎦᏫᎯᏍᏓD v.t. he's leaving a living thing behind (Feeling 1975:98)

jiyakahiya?a ᏂᏍᏫᎯᏍᏓD

uwakahiyv?i ᎤGᏫᎯBT

gakahiyasgo?i ᎦᏫᎯᏍᏫᏫAT

hiyakahiya ᎯᏍᏫᎯᏍᏫ

uwakahiyasdi ᎤGᏫᎯᏍᏫᏫᏗ

Lastly, I did not record entries of verbs with derivational suffixes. There are 190 entries of verbs with derivational suffixes in Feeling's dictionary. As mentioned in Section 2.4, derivational suffixes add onto the meaning of a verb by specifying information about the verb's aspect. I chose not to record these verbs because their stem suffix forms are determined by the derivational suffix they take (Montgomery-Anderson 2015:384). There are nine types of derivational suffixes, but only six types are found in Feeling's dictionary. Examples of these six types and their stem suffix forms are given below. The three derivational suffixes not included in any of Feeling's verb entries are the accidental suffix, the pre-incipient suffix, and the purpose suffix.

Table 3E: Duplicative stem suffixes (Montgomery-Anderson 2015:384)

PRC	**INC**	**IMM**	**CMP**	**INF**
-ha	-sg-	-a	-hn-/-hl-	(h)di

"The duplicative suffix indicates that an action is repeated." The action is only repeated once. (Montgomery-Anderson 2015:384).

Table 3F: Example with the duplicative suffix (Feeling 1975:74)

Stem Suffix	**Cherokee**	**English**
PRC	daliyosiha	He's changing his socks.
INC	daliyosihoʔi	He was changing his socks.
IMM	daliyosa	He (just) changed his socks.
CMP	duliyosvhvʔi	He changed his socks.
INF	duliyosvhdi	for him to change his socks

Table 3G: Repetitive stem suffixes (Montgomery-Anderson 2015:385)

PRC	**INC**	**IMM**	**CMP**	**INF**
-ʔa	-sg-	-ja	-ʔ-/-ø-	-sdi

Like the duplicative suffix, the repetitive suffix indicates that an action is repeated, but unlike the duplicative suffix, it indicates that the action is repeated multiple times (Montgomery-Anderson 2015:385). One of the entries for the Completive category is [-ø-], which denotes that the stem suffix has a null form.

Table 3H: Example with the repetitive suffix (Feeling 1975:112)

Stem Suffix	Cherokee	English
PRC	ganvgwaloʔa	He's hammering it.
INC	ganvgwalosgoʔi	He was hammering it.
IMM	ganvgwaloja	He (just) hammered it.
CMP	unvgwaloʔvʔi	He hammered it.
INF	unvgwalosdi	for him to hammer it

Table 3I: Terminative stem suffixes (Montgomery-Anderson 2015:387)

PRC	INC	IMM	CMP	INF
-sga	-sg-	-na	-(h)n-	-sdi

"The terminative indicates a definitive completion of the action" (Montgomery-Anderson 2015:387).

Table 3J: Example with the terminative suffix (Feeling 1975:57)

Stem Suffix	Cherokee	English
PRC	asvhvsga	He's using it up.
INC	asvhvsgoʔi	He was using it up.
IMM	asvhna	He (just) used it up.
CMP	usvhnvʔi	He used it up.
INF	usvhvsdi	for him to use it up

Table 3K: Ambulative stem suffixes (Montgomery-Anderson 2015:388)

PRC	INC	IMM	CMP	INF
-ha	-h-	-a	-l-	-sdi

"The ambulative expresses the idea of repeated movement" (Montgomery-Anderson 2015:388).

Table 3L: Example with the ambulative suffix (Feeling 1975:100)

Stem Suffix	Cherokee	English
PRC	galidoha	He's climbing around.
INC	galidohoʔi	He was climbing around.
IMM	galida	He (just) climbed around.
CMP	ulidolvʔi	He climbed around.
INF	ulidasdi	for him to climb around

Table 3M: Movement stem suffixes (Montgomery-Anderson 2015:390)

PRC	INC	IMM	CMP	INF
-ga	-g-	-na/-ga	-s-	-sdi

The movement suffix can either "indicate that an action is performed at intervals or that the subject is going somewhere to perform an action" (Montgomery-Anderson 2015:390).

Table 3N: Example with the movement suffix (Feeling 1975:111)

Stem Suffix	Cherokee	English
PRC	gansinega	He's dragging it.
INC	gansinegoʔi	He was dragging it.
IMM	gansinuga	He (just) dragged it.
CMP	unsinvsvʔi	He dragged it.
INF	unsinvsdi	for him to drag it

Table 3O: Applicative stem suffixes (Montgomery-Anderson 2015:400)

PRC	INC	IMM	CMP	INF
-ha	-h-	-li/-si	-l-	-hdi

The applicative suffix is a valency-increasing suffix, so it is "attached to verbs to indicate the presence of an additional object affected by the verb" (Montgomery-Anderson 2015:400).

Table 3P: Example with the applicative suffix (Feeling 1975:174)

Stem Suffix	Cherokee	English
PRC	ulsdahneha	It's happening to him.
INC	ulsdahnehoʔi	It was happening to him.
IMM	ulsdasi	It (just) happened to him.
CMP	ulsdahnelvʔi	It happened to him.
INF	ulsdahnehdi	for it to happen to him

Table 3Q: Causative stem suffixes (Montgomery-Anderson 2015:405)

PRC	INC	IMM	CMP	INF
-ha	-sg	-a	-an-/-n-	-(h)di

The causative suffix is a valency-increasing suffix just as the applicative suffix is. It "raises the valency of the verb by indicating a participant that causes the action" (Montgomery-Anderson 2015:405).

Table 3R: Example with the causative suffix (Feeling 1975:6)

Stem Suffix	Cherokee	English
PRC	adanohyvhlisdiha	It's making noise.
INC	adanohyvhlisdisgoʔi	It was making noise.
IMM	adanohyvhlisda	It (just) made noise.
CMP	udanohyvhlisdanvʔi	It made noise.
INF	danohyvhlisdohdi	for him to make noise

The number of verbs in the dictionary that I did not record totaled 348 verbs. After recording the stem suffix forms of the remaining 357 verbs in the format discussed above, I began to group certain verbs together based on which stem suffix forms they took. A verb's five stem suffix forms make up what I call a verb's pattern. I put verbs into groups with other verbs that shared the same pattern; in other words, I grouped together verbs that had identical stem suffix forms in each of the five stem suffix categories. For example, the verbs meaning "to tell," "to think," and "to cheat," each patterned with the following stem suffix forms:

Table 3S: The stem suffix pattern of the verbs meaning "to tell", "to think", and "to cheat"

PRC	INC	IMM	CMP	INF
-ha	-sg-	-vla	-hl-	-hdi

After doing this with all 357 verbs I had over 50 groups, meaning that I had over 50 patterns. Some groups had upwards of 30 verbs in them whereas others only had one or two verbs that belonged to that group's pattern. Next, I identified the largest groups of verbs and their patterns. Then I looked for smaller groups whose patterns were similar to those of the largest groups. If a smaller group's pattern matched three or four of the stem suffix forms of the largest group's pattern, I then condensed the two groups into one. Below are some examples of large and small groups and their patterns.

Table 3T: Example of a Large Group's Pattern

PRC	INC	IMM	CMP	INF
-sga	-sg-	-vga	-an-	-di

Table 3U: Example of a Small Group's Pattern

PRC	INC	IMM	CMP	INF
-sga	-sg-	-vga	-an-	-sdi

The only difference between the two patterns above is what form their Infinitive suffix takes. Since the two groups' patterns were so similar, I was able to condense these two groups into one. I continued to do this with other groups and other patterns until I had condensed the majority of

the patterns into roughly eleven groups. I had several smaller groups leftover whose patterns did not fit the patterns of any of the larger groups. I put these leftover groups to the side and focused on the remaining eleven groups. I did an analysis of the verbs in each of these groups and discovered that they had phonologically similar root-final syllables. For example, in one group the majority of verbs had root-final syllables [gi] and [ʔi]. The root-final syllables proved to be accurate markers for which verbs belonged to which groups. Therefore, I chose to categorize the eleven verb classes presented in the next section by the root-final syllables of the verbs of which they are comprised.

SECTION 4: CHEROKEE VERB CLASSES

Below is a table presenting the eleven verb classes I propose for Cherokee. The columns labeled "Verb Class" and "Root-Final Syllables" give the number of the verb class and the root-final syllables that the verbs belonging to that class take. The five columns that follow are labeled according to the five stem suffix categories. The forms listed in these five columns make up the prototypical pattern of a verb class. The forms that a verb takes in each of the five stem suffix categories determines whether or not it can fit into this pattern. The column labeled "Accuracy" gives the number of verbs that fit into a class's prototypical pattern out of the total number of verbs recorded for that class. The number is also given as a percentage. This number shows how accurate the prototypical pattern is for the verbs in that class. For example, 33 verbs were recorded for Class I, and 29 of them fit into Class I's pattern. Class I's pattern is accurate for 88% of the verbs in that class.

Table 4: Cherokee Verb Classes

Verb Class	**Root-Final Syllables**	**PRC**	**INC**	**IMM**	**CMP**	**INF**	**Accuracy**
I	**di, wi**	ʔa	sg	a/vga/aga	ø/an/ vh/l	sdi/odi/tdi/ di/asdi	29/33 (88%)
II	**gi, ʔi**	ʔa	sg	ø/a	s	sdi	18/23 (78%)
III	**gv, yv**	ʔa	sg	na	s	sdi	8/12 (75%)
IV	**de, le, ne, te, we**	ʔa	sg	agi/aga/i	s/sg/aʔ	sdi	23/39 (59%)
V	**hi, ni, yo**	ha/hiha	h/hih	ga/a/ø/ʔa	(h)l/al	sdi/di/asdi	25/37 (68%)
VI	**ge, he, ke, ye, ʔv**	ha/ʔa	sg	vla/a	h/ʔ	hdi/di	15/18 (83%)
VII	**li, ti, yi**	ha/ʔa	sg	a/vna	vh/vhn	(vh)di	20/39 (51%)
VIII	**dv, hlu, hv, lv, nv, tv, ʔv**	sga	sg	ga/ʔvga/na	an/n/hn	di/hdi/sdi/ tdi/kdi/ ohdi/nhdi	63/75 (84%)
IX	**go**	sga	sg	la	s	sdi	6/9 (67%)
X	**l, t, w**	sga/isga	sg	sa/a/ø/i	s	sdi/isdi	10/18 (56%)
XI	**sa, ta**	sga	sg	ø	h	sdi	4/4 (100%)

Each of the eleven verb classes are discussed below in greater detail. There are three tables given for each class. The first table shows the prototypical pattern of the class. It presents the stem suffix forms of the majority of the patterns taken by the verbs in the class. Each class has a unique prototypical pattern that sets it apart from every other class. The prototypical pattern is the most important pattern for second language learners of Cherokee to learn. Once having identified a verb as belonging to a certain class, a learner can apply the pattern to the verb and know which forms it takes in each of the five stem suffix categories. The second table shows every pattern that occurs for all of the verbs in a given class, and how many times it occurs. The purpose of this table is to show which pattern is the most frequent one and which patterns occur only infrequently. The third table shows how many of the class's patterns have a certain number of stem suffix forms that are identical to those of the most frequent pattern. The purpose of this table is to show how accurately the class's most frequent pattern represents the other patterns of the class. This is important information for second language learners of Cherokee who might make generalizations about how verbs that belong to that class pattern based on the most frequent pattern of that class. Following the three tables are several examples that are given for the verbs in each class. The Incompletive and Completive forms of the verbs are given in full; their final suffixes, [-oʔi] and [-vʔi], are attached to the verb stem.

4.1 Class I Verbs

Table 4.1 A shows the prototypical pattern for verbs in Class I. Twenty-nine out of the 33 verbs in this class fit this pattern; in other words, 88 percent of the verbs in Class I have patterns that are represented by this one.

Table 4.1 A: The Prototypical Pattern of Class I

PRC	INC	IMM	CMP	INF
-ʔa	-sg-	-a/-vga/-aga	-ø-/-an-/-vh-/-l-	-sdi/-odi/-tdi/ -di/-asdi

Class I verbs have root-final syllables that end in [di] and [wi]. I say that these root-final syllables end in [di] and [wi] instead of saying that they are [di] and [wi], because an additional phoneme will often precede them. If this is case, then the root-final syllable could be [hdi] instead of [di] or [hwi] instead of [wi]. There are 33 verbs from my data that belong to this class. The most frequent pattern occurs 19 times. Four of the patterns in this class are exceptions. Exceptional patterns are those that do not fit into the prototypical pattern of the class. A pattern fits into the prototypical pattern if all five of its stem suffix forms are ones that are listed as stem suffix forms of the prototypical pattern. The patterns in this class that are not exceptions have stem suffix forms that are identical to those of the most frequent pattern in the Present Continuous and the Incompletive. They take forms that are phonologically similar to those of the most frequent pattern in the Immediate and the Infinitive. No patterns, save for one that is an exception, take the form [s] in the Completive; this sets this class apart from Class II.

Table 4.1 B shows all of the patterns for verb roots ending in [di] or [wi] and how many times those patterns occur. The first five columns are labeled according to their stem suffix category. The numbers in the column labeled “Frequency” give the number of times that a specific pattern occurs. The numbers in the column labeled “Similarity” are equivalent to the number of stem suffix forms that a certain pattern has in common with the forms of the most frequent pattern. The column labeled “Typical” tells whether a verb’s pattern is typical of that class and thus fits into the prototypical pattern or whether it is atypical of the class and does not fit into the prototypical pattern. A “yes” in this column means that the pattern is typical of the class and a “no” means that it is atypical, or that it is an exception. Simply because the majority

of a pattern's stem suffix forms are identical to those of the most frequent pattern does not guarantee it to be a typical pattern. Similarly, just because a given pattern only has two stem suffix forms that are identical to those of the most frequent pattern does not guarantee it to be an atypical pattern. What makes a pattern typical, and what allows it to be included in the class's prototypical pattern, is which of its stem suffix forms match those of the most frequent pattern. Typical patterns almost always have forms identical to those of the most frequent pattern in the Present Continuous and the Incompletive. They rarely have identical forms to those of the most frequent pattern in the Immediate and the Completive, but their forms are phonologically similar. Therefore, a typical pattern's forms could be identical to those of the most frequent pattern only in the Present Continuous and Incompletive forms but still be considered a typical pattern. Some atypical patterns also take forms that are identical to those of the most frequent pattern in the Present Continuous and Incompletive; however, their forms in the Immediate and Completive are not phonologically similar to those of the most frequent pattern.

Table 4.1 B: Class I Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ʔa	-sg-	-a	-ø-	-sdi	19	5	yes
-ʔa	-sg-	-vga	-an-	-odi	3	2	yes
-ʔa	-sg-	-a	-vh-	-tdi	2	3	yes
-ha	-sg-	-a	-vh-	-tdi	2	2	yes
-sga	-sg-	-a	-s-	-sdi	2	2	no
-ʔa	-sg-	-a	-ø-	-asdi	1	4	yes
-ʔa	-sg-	-aga	-l-	-di	1	2	yes
-ʔa	-sg-	-aga	-an-	-odi	1	2	yes
-ha	-sg-	-ø	-vh-	-tdi	1	1	no
-ga	-g-	-gi	-j-	-sdi	1	1	no

The fractions and percentages in Table 4.1 C are based on the numbers in the "Similarity" column of the table above. In the table below, the column labeled "5" gives the number of verbs in this class whose stem suffix forms are identical to those of the most frequent pattern divided

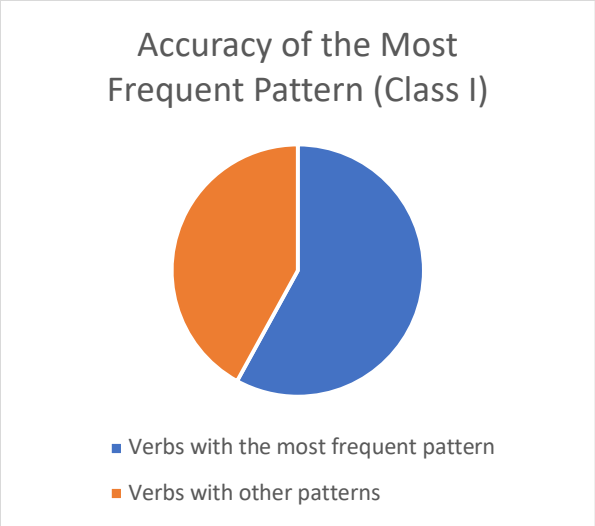
by the total number of verbs in this class. This fraction is also given as a percentage. The column labeled “4+” gives the number of verbs in this class that have four or more stem suffix forms that are identical to those of the most frequent pattern divided by the total number of verbs in this class. Again, this fraction is also given as a percentage. The column labeled “3+” gives the number of verbs in this class that have three or more stem suffix forms that are identical to those of the most frequent pattern divided by the total number of verbs in the class. The columns labeled “2+” and “1+” give the same kind of information as the information in columns “4+” and “3+.” The last column, labeled “0,” gives the number of verbs in this class that have no stem suffix forms in common with those of the most frequent pattern divided by the total number of verbs in this class.

Fifty-eight percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Sixty-one percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 67 percent have at least three, and 94 percent have at least two. No pattern in this class has five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.1 C: Comparison to the Most Frequent Pattern of Class I

5	**4+**	**3+**	**2+**	**1+**	**0**
19/33	20/33	22/33	31/33	33/33	0/33
58%	61%	67%	94%	100%	0%

It is the case that almost every class’s prototypical pattern is a better representation of the stem suffix forms that the verbs in that class take than the most frequent pattern is. Below are two pie charts that show the accuracy of both patterns when applied to the verbs in this class.



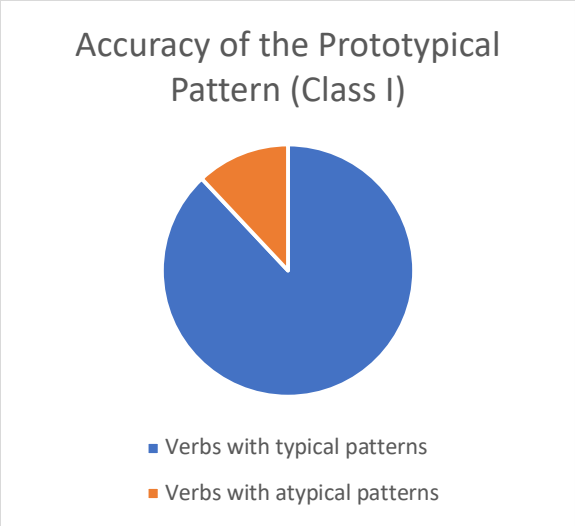


Table 4.1 D: Example with [di] (Feeling 1975:51)

Stem Suffix Category	**Cherokee**	**English**
PRC	asgolvdiʔa	He's erasing it.
INC	asgolvdisgoʔi	He was erasing it.
IMM	asgolvda	He (just) erased it.
CMP	usgolvdvʔi	He erased it.
INF	usgolvdisdi	for him to erase

Table 4.1 E: Example with [wi] (Feeling 1975:31)

Stem Suffix Category	**Cherokee**	**English**
PRC	ajewiʔa	He's spilling it.
INC	ajewisgoʔi	He was spilling it.
IMM	ajewa	He (just) spilled it.
CMP	ujewvʔi	He spilled it.
INF	ujewasdi	for him to spill

4. 2 Class II Verbs

Table 4.2 A shows the prototypical pattern for verbs in Class II. Eighteen out of the 23 verbs in this class fit this pattern. Seventy-eight percent of the verbs in Class II have patterns that are represented by this one.

Table 4.2 A: The Prototypical Pattern of Class II

PRC	**INC**	**IMM**	**CMP**	**INF**
-ʔa	-sg-	-ø/-a	-s-	-sdi

Class II verbs have root-final syllables that end in [gi] and [ʔi]. There are 23 verbs from my data that belong to this class. The most frequent pattern occurs 17 times. The patterns whose stem suffix forms are not [s] in the Completive are exceptions. This class, like Class I, has root-final syllables that end in the vowel [i], but it is distinguished from Class I by its stem suffix form, [s], in the Completive.

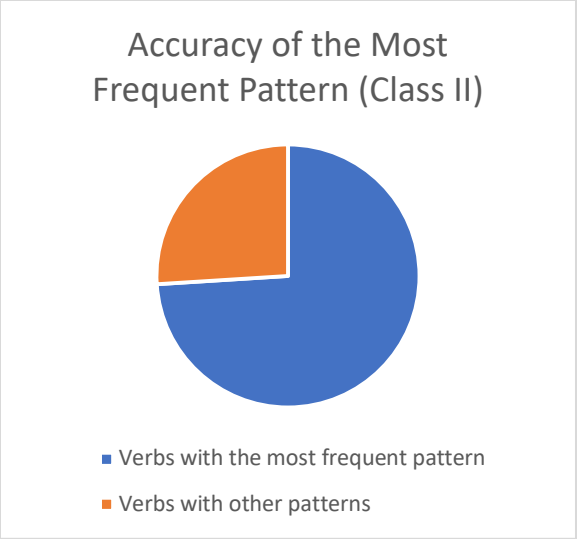
Table 4.2 B: Class II Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ʔa	-sg-	-ø	-s-	-sdi	17	5	yes
-ʔa	-sg-	-vga	-an-	-odi	4	2	no
-ʔa	-sg-	-a	-s-	-sdi	1	4	yes
-ʔa	-sg-	-a	-ø-	-sdi	1	3	no

Seventy-four percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Seventy-eight percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern, and 83 percent have at least three. One hundred percent of verbs in this class have at least two stem suffix forms in common with those of the most frequent pattern even though two out of four of this class's patterns are exceptions. No pattern in this class has five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.2 C: Comparison to the Most Frequent Pattern of Class II

5	4+	3+	2+	1+	0
17/23	18/23	19/23	23/23	23/23	0/23
74%	78%	83%	100%	100%	0%



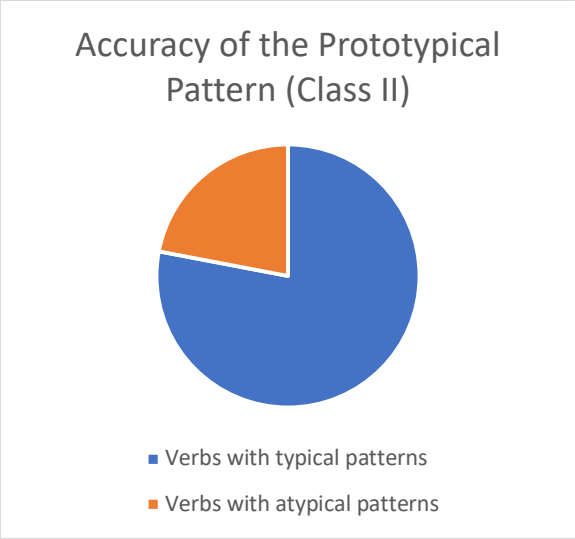


Table 4.2 D: Example with [gi] (Feeling 1975:54)

Stem Suffix Category	**Cherokee**	**English**
PRC	asolvdagiʔa	He's waving his hand.
INC	asolvdagisgoʔi	He was waving his hand.
IMM	asolvdagi	He (just) waved his hand.
CMP	usolvdagisvʔi	He waved his hand.
INF	usolvdagisdi	to wave his hand

Table 4.2 E: Example with [ʔi] (Feeling 1975:48)

Stem Suffix Category	**Cherokee**	**English**
PRC	asduʔiʔa	He's opening it.
INC	asduʔisgoʔi	He was opening it.
IMM	asduʔi	He (just) opened it.
CMP	usduʔisvʔi	He opened it.
INF	usduʔisdi	for him to open it

4.3 Class III Verbs

Table 4.3 A shows the prototypical pattern for verbs in Class III. Eight out of the 12 verbs in this class fit this pattern. Seventy-five percent of the verbs in Class III have patterns that are represented by this one.

Table 4.3 A: The Prototypical Pattern of Class III

PRC	**INC**	**IMM**	**CMP**	**INF**
-ʔa	-sg-	-na	-s-	-sdi

Class III verbs have verb roots that end in [gv] and [yv]. Class III is a small class, with only 12 verbs from my data that belong to this class. The most frequent pattern occurs eight times. Every other pattern is an exception. Other verbs with root-final syllables ending in the vowel [v] belong to Class VIII. Class III is distinguished from Class VIII by its stem suffix forms in the Present Continuous and the Completive.

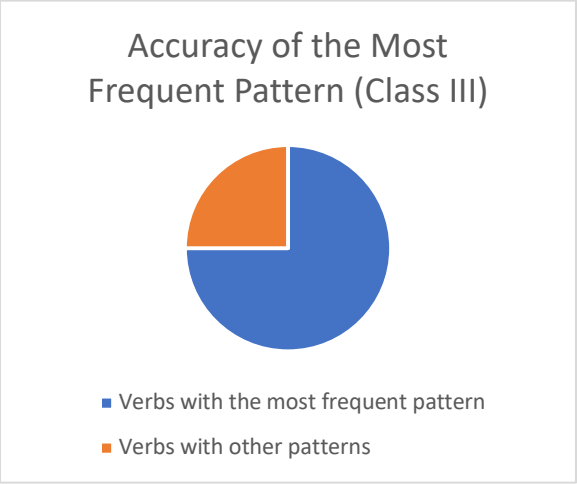
Table 4.3 B: Class III Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ʔa	-sg-	-na	-s-	-sdi	8	5	yes
-hiha	-hih-	-ha	-hl-	-sdi	1	1	no
-sga	-sg-	-ga	-n-	-di	1	1	no
-sga	-sg-	-hi	-s-	-hisdi	1	1	no
-ga	-g-	-gi	-j-	-ʔisdi	1	0	no

Seventy-five percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Seventy-five percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 75 percent have at least three, 75 percent have at least two, and 92 percent have at least one. This class has one pattern with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.3 C: Comparison to the Most Frequent Pattern of Class III

5	4+	3+	2+	1+	0
8/12	8/12	8/12	8/12	11/12	1/12
75%	75%	75%	75%	92%	8%



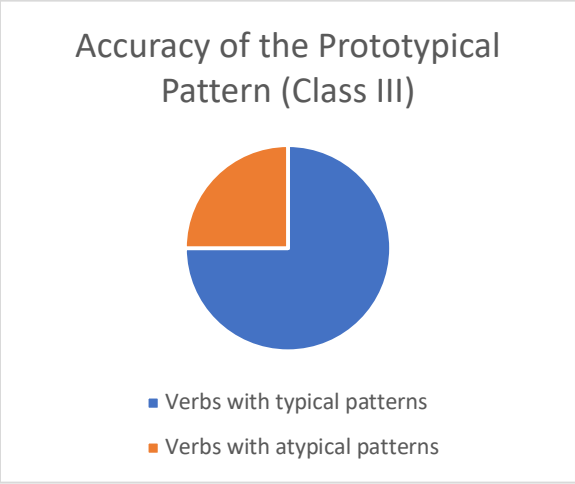


Table 4.3 D: Example with [gv] (Feeling 1975:38)

Stem Suffix Category	Cherokee	English
PRC	alasgvʔa	He's taking a step.
INC	alasgvsgoʔi	He was taking a step.
IMM	alasgvna	He (just) took a step.
CMP	ulasgvsvʔi	He took a step.
INF	ulasgvsdi	for him to take a step

Table 4.3 E: Example with [yv] (Feeling 1975:117)

Stem Suffix Category	Cherokee	English
PRC	gawohiliyvʔa	He's replying.
INC	gawonihiliyvsgoʔi	He was replying.
IMM	gawonihiliyvna	He (just) replied.
CMP	uwonihiliyvsvʔi	He replied.
INF	uwonihiliyvsdi	for him to reply

4.4 Class IV Verbs

Table 4.4 A shows the prototypical pattern for verbs in Class IV. Twenty-three out of the 39 verbs in this class fit this pattern. Fifty-nine percent of the verbs in Class IV have patterns that are represented by this one. In the case of this class, the prototypical pattern is a much better representation of the stem suffix forms that the verbs in this class take than the most frequent pattern is.

Table 4.4 A: The Prototypical Pattern of Class IV

PRC	INC	IMM	CMP	INF
-ʔa	-sg-	-agi/-aga/-i	-s-/-sg-/-aʔ-	-sdi

Class IV verbs have root-final syllables that end in [de], [le], [ne], [te], and [we]. There are 39 verbs from my data that belong to this class. The most frequent pattern occurs 18 times. There are 12 patterns that are considered exceptional patterns because they do fit into the prototypical pattern; however, many of them have up to three stem suffix forms that are identical to those of the most frequent pattern. Class VI verbs also have root-final syllables ending in the vowel [e]. Classes IV and VI can be distinguished from each other by their different stem suffix forms in the both the Immediate, and the Completive.

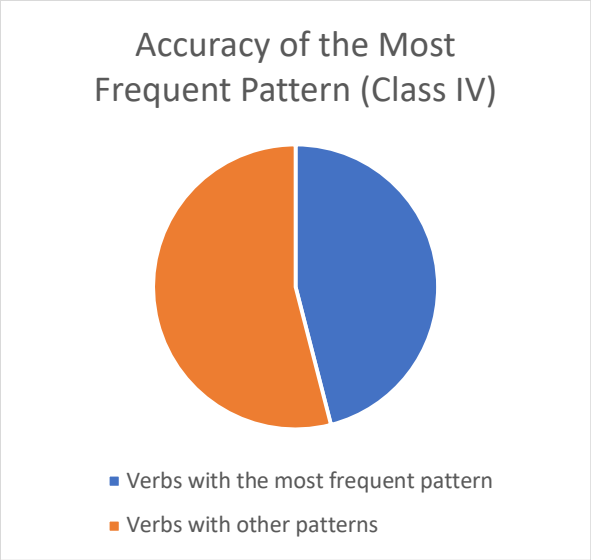
Table 4.4 B: Class IV Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ʔa	-sg-	-agi	-s-	-sdi	18	5	yes
-ga	-g-	-gi	-j-	-ʔisdi	3	0	no
-sga	-sg-	-aga	-s-	-sdi	2	3	no
-sga	-sg-	-hi	-s-	-hisdi	2	2	no
-ga	-g-	-gi	-j-	-sdi	2	1	no
-hiha	-hih-	-ga	-hl-	-sdi	2	1	no
-ʔa	-sg-	-i	-s-	-sdi	1	4	yes
ʔa	-sg-	-aga	-sg-	-sdi	1	3	yes
ʔa	-sg-	-aga	-aʔ-	-sdi	1	3	yes
-sga	-sg-	-vla	-s-	-sdi	1	3	no
-sga	-sg-	-ø	-s-	-sdi	1	3	no
-ʔa	-sg-	-a	-ʔ-	-di	1	1	no
-ha	-sg-	-vla	-hl-	-hdi	1	1	no
-ha	-sg-	-a	-h-	-di	1	1	no
-ha	-h-	-ga	-l-	-hdi	1	0	no
-ga	-g-	-uga	-nvs-	-nvdi	1	0	no

Only 46 percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Forty-nine percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 64 percent have at least three, 69 percent have at least two, and 87 percent have at least one. Thirteen percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.4 C: Comparison to the Most Frequent Pattern of Class IV

5	4+	3+	2+	1+	0
18/39	19/39	25/39	27/39	34/39	5/39
46%	49%	64%	69%	87%	13%



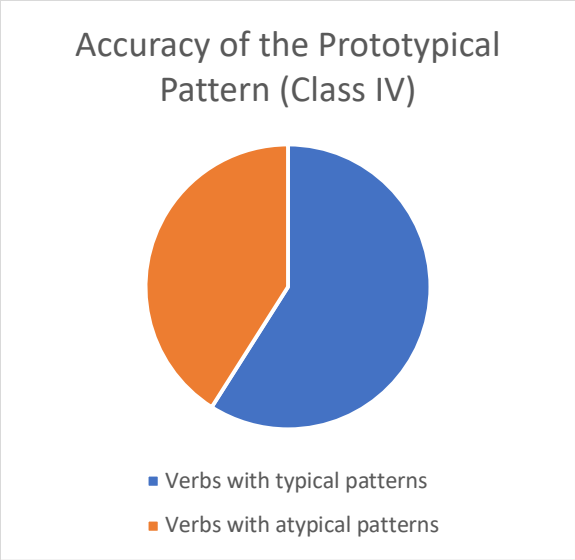


Table 4.4 D: Example with [de] (Feeling 1975:33)

Stem Suffix Category	**Cherokee**	**English**
PRC	akodeʔa	He's shoveling.
INC	akodesgoʔi	He was shoveling.
IMM	akodagi	He (just) shoveled.
CMP	ukodesvʔi	He shoveled.
INF	ukodesdi	for him to shovel

Table 4.4 E: Example with [le] (Feeling 1975:41)

Stem Suffix Category	**Cherokee**	**English**
PRC	alsduleʔa	He's taking off his cap.
INC	alsdulesgoʔi	He was taking off his cap.
IMM	alsdulagi	He (just) took off his cap.
CMP	ulsdulesvʔi	He took off his cap.
INF	ulsdulesdi	to take off one's cap

Table 4.4 F: Example with [ne] (Feeling 1975:111)

Stem Suffix Category	**Cherokee**	**English**
PRC	gansaneʔa	He's pulling.
INC	gansanesgoʔi	He was pulling.
IMM	gansanagi	He (just) pulled.
CMP	unsanesvʔi	He pulled.
INF	unsanesdi	for him to pull

Table 4.4 G: Example with [te] (Feeling 1975:29)

Stem Suffix Category	Cherokee	English
PRC	ahyvteʔa	He's kicking.
INC	ahyvhtesgoʔi	He was kicking.
IMM	ahyvhtagi	He (just) kicked.
CMP	uhyvhtesvʔi	He kicked.
INF	uhyvhtesdi	to kick

Table 4.4 H: Example with [we] (Feeling 1975:69)

Stem Suffix Category	Cherokee	English
PRC	dahnaweʔa	He's undressing.
INC	dahnawesgoʔi	He was undressing.
IMM	dahnawagi	He (just) undressed.
CMP	duhnawesvʔi	He undressed.
INF	duhnawesdi	for him to undress

4.5 Class V Verbs

Table 4.5 A shows the prototypical pattern for verbs in Class V. Twenty-five out of the 37 verbs in this class fit this pattern. Sixty-eight percent of the verbs in Class V have patterns that are represented by this one. Like in the case of Class IV, the prototypical pattern of this class is a much better representation of the stem suffix forms that the verbs in this class take than the most frequent pattern is.

Table 4.5 A: The Prototypical Pattern of Class V

PRC	INC	IMM	CMP	INF
-ha/-hiha	-h-/-hih-	-ga/-a/-ø/-ʔa	-(h)l/-al	-sdi/-di/-asdi

Class V verbs have root-final syllables that end in [hi], [ni], and [yo]. There are 37 verbs from my data that belong to this class. The most frequent pattern only occurs 12 times, but the stem suffix forms of many of the other patterns only differ from this pattern in one stem suffix category. This is the only class in which not all of the verbs' root-final syllables are similar to each other in their phonology. It seems that [yo] is out of place in a class that includes verbs with root-final syllables ending in the vowel [i], but the way verbs with root-final syllables ending in [yo] pattern, clearly shows that they belong in this class.

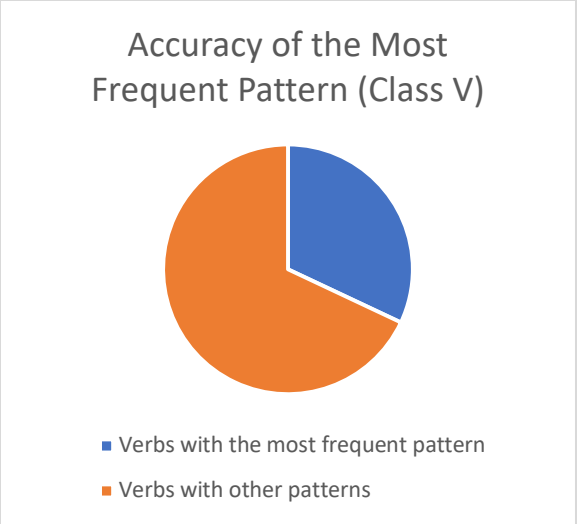
Table 4.5 B: Class V Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ha	-h-	-ga	-l-	-sdi	12	5	yes
-hiha	-hih-	-ga	-(h)l-	-sdi	3	2	yes
-ha	-sg-	-a	-vh-	-hdi	3	1	no
-sga	-sg-	-hi	-s-	-hisdi	3	0	no
-ha	-h-	-ga	-l-	-di	2	4	yes
-ha	-h-	-ga	-al-	-sdi	2	4	yes
-hiha	-hih-	-ha	-hl-	-sdi	2	1	yes
-ga	-g-	-gi	-j-	-sdi	2	1	no
-ha	-h-	-ʔa	-l-	-sdi	1	4	yes
-ha	-h-	-ø	-l-	-sdi	1	4	yes
-ha	-h-	-aga	-l-	-di	1	3	yes
-ha	-h-	-aga	-l-	-asdi	1	3	yes
-ha	-sg-	-hi	-s-	-hisdi	1	1	no
-ʔa	-sg-	-ø	-s-	-sdi	1	1	no
-ʔa	-sg-	-a	-vh-	-hdi	1	0	no
-ga	-g-	-gi	-j-	-ysdi	1	0	no

Only 32 percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Forty-nine percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 54 percent have at least three, 62 percent have at least two, and 86 percent have at least one. Fourteen percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.5 C: Comparison to the Most Frequent Pattern of Class V

5	4+	3+	2+	1+	0
12/37	18/37	20/37	23/37	32/37	5/37
32%	49%	54%	62%	86%	14%



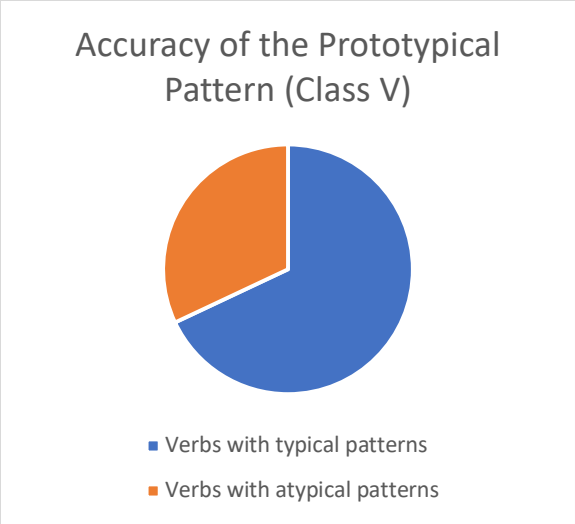


Table 4.5 D: Example with [hi] (Feeling 1975:62)

Stem Suffix Category	**Cherokee**	**English**
PRC	ayatohiha	He is distributing something.
INC	ayatohihoʔi	He was distributing something.
IMM	ayatohi	He (just) distributed something.
CMP	uyatohlvʔi	He distributed something.
INF	uyatohisdi	for him to distribute something

Table 4.5 E: Example with [ni] (Feeling 1975:57)

Stem Suffix Category	**Cherokee**	**English**
PRC	asvhniha	He's touching him.
INC	asvhnihoʔi	He was touching him.
IMM	asvnhga	He (just) touched him.
CMP	usvhnilvʔi	He touched him.
INF	usvnsdi	for him to touch him

Table 4.5 F: Example with [yo] (Feeling 1975:6)

Stem Suffix Category	**Cherokee**	**English**
PRC	adanuteyoha	He's twisting.
INC	adanuteyohoʔi	He was twisting.
IMM	adanuteyaga	He (just) twisted.
CMP	udanuteyolvʔi	He twisted.
INF	udanuteyodi	for him to twist

4.6 Class VI Verbs

Table 4.6 A shows the prototypical pattern for verbs in Class VI. Fifteen out of 18 verbs in this class fit this pattern. Eighty-three percent of the verbs in Class VI have patterns that are represented by this one.

Table 4.6 A: The Prototypical Pattern of Class VI

PRC	INC	IMM	CMP	INF
-ha/-ʔa	-sg-	-vla/-a	-h/-ʔ	-hdi/-di

Class VI, like Class III, is a relatively small class. The verbs in this class have root-final syllables that end in [ge], [he], [ke], [ye], and [ʔe]. There are 18 verbs from my data that belong to this class. The most frequent pattern occurs ten times, and there are two patterns that are exceptions. Class IV verbs also have root-final syllables that end in [e]. Class VI is distinguished from Class IV by its stem suffix forms in the Immediate and the Completive.

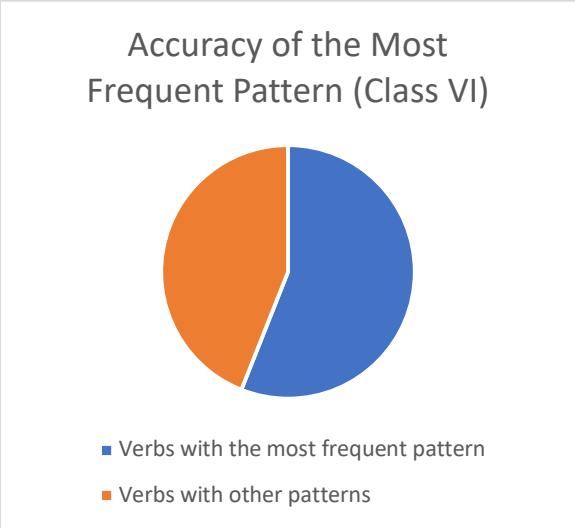
Table 4.6 B: Class VI Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ha	-sg-	-vla	-h(l)-	-hdi	10	5	yes
-ʔa	-sg-	-a	-ʔ-	-di	4	1	yes
-ha	-sg-	-a	-h-	-hdi	1	3	yes
-ʔa	-sg-	-agi	-s-	-sdi	1	1	no
-sga	-sg-	-hi	-s-	-hisdi	1	1	no
-ga	-g-	-gi	-j-	-ʔisdi	1	0	no

Fifty-six percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Fifty-six percent of the verbs in this class also have at least four stem suffix forms in common with those of the most frequent pattern; 61 percent have at least three, 61 percent have at least two, and 94 percent have at least one. Six percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.6 C: Comparison to the Most Frequent Pattern of Class VI

5	4+	3+	2+	1+	0
10/18	10/18	11/18	11/18	17/18	1/18
56%	56%	61%	61%	94%	6%



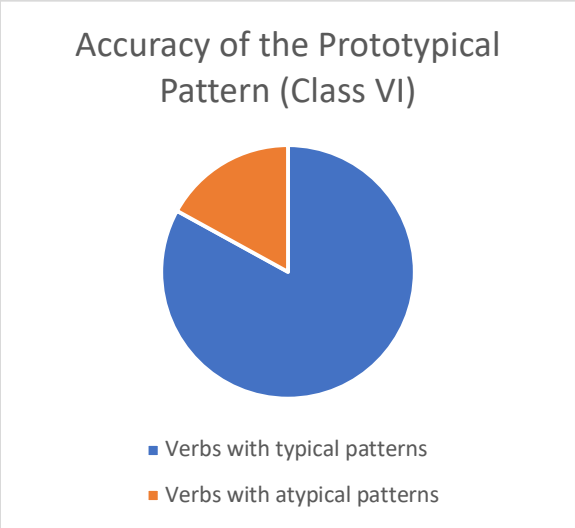


Table 4.6 D: Example with [ge] (Feeling 1975:68)

Stem Suffix Category	Cherokee	English
PRC	dahlihgeha	He's rocking.
INC	dahlihgesgoʔi	He was rocking.
IMM	dahlihgvla	He (just) rocked.
CMP	dahlihgehvʔi	He rocked.
INF	dahlihgehdi	for him to rock

Table 4.6 E: Example with [he] (Feeling 1975:141)

Stem Suffix Category	Cherokee	English
PRC	anoheha	He's telling it.
INC	anohesgoʔi	He was telling it.
IMM	anohvla	He (just) told it.
CMP	anohehlvʔi	He told it.
INF	anohehdi	for him to tell it

Table 4.6 F: Example with [ke] (Feeling 1975:4)

Stem Suffix Category	Cherokee	English
PRC	adakeha	He's looking at himself in a mirror.
INC	adakesgoʔi	He was looking at himself in a mirror.
IMM	adakvla	He (just) looked at himself in a mirror.
CMP	adakehvʔi	He looked at himself in a mirror.
INF	adakehdi	for him to look at himself in a mirror

Table 4.6 G: Example with [ye] (Feeling 1975:6)

Stem Suffix Category	Cherokee	English
PRC	adahnoyeha	He's fanning himself.
INC	adahnoyesgoʔi	He was fanning himself.
IMM	adahnoyvla	He (just) fanned himself.
CMP	udahnoyehvʔi	He fanned himself.
INF	udahnoyehdi	to fan himself

Table 4.6 H: Example with [ʔe] (Feeling 1975:37)

Stem Suffix Category	Cherokee	English
PRC	alasdaʔeha	He's speaking badly of it.
INC	alasdaʔesgoʔi	He was speaking badly of it.
IMM	alasdaʔvla	He (just) spoke badly of it.
CMP	alasdaʔehlvʔi	He spoke badly of it.
INF	alasdaʔehdi	for him to speak badly of it

4.7 Class VII Verbs

Table 4.7 A shows the prototypical pattern for verbs in Class VII. Twenty out of the 39 verbs in this class fit this pattern. Fifty-one percent of the verbs in Class VII have patterns that are represented by this one. Like in the cases of Classes IV and VI, the prototypical pattern of Class VII is a much better representation of the stem suffix forms that the verbs in this class take than the most frequent pattern is.

Table 4.7 A: The Prototypical Pattern of Class VII

PRC	INC	IMM	CMP	INF
-ha/-ʔa	-sg-	-a/-vna	-vh-/-vhn-	-(vh)di

Class VII verbs have root-final syllables that end in [li], [ti], and [yi]. There are 39 verbs from my data that belong to this class. The most frequent pattern occurs 12 times and the second most frequent pattern six times. Many of the patterns in this class are similar to the patterns of Classes I and V. All of these classes have root-final syllables ending in the vowel [i]. The most frequent pattern of this class sets it apart from Classes I and V.

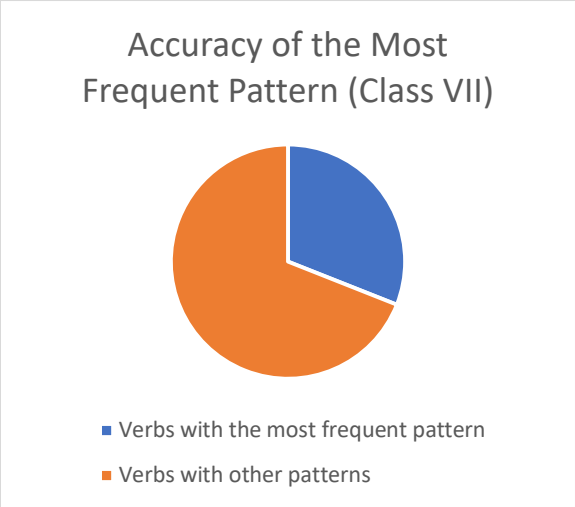
Table 4.7 B: Class VII Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-ha	-sg-	-a	-vh-	-(vh)di	12	5	yes
-ha	-h-	-ga	-(h)l-	-sdi	6	1	no
-ʔa	-sg-	-a	-vh-	-di	4	4	yes
-ʔa	-sg-	-vga	-an-	-odi	4	1	no
-ga	-g-	-gi	-j-	-sdi	4	0	no
-ha	-sg-	-vna	-vhn-	-vhdi	2	3	yes
-ʔa	-sg-	-a	-s-	-sdi	2	2	no
-sga	-sg-	-hi	-s-	-hisdi	2	1	no
-ʔa	-sg-	-a	-vh-	-di	1	4	yes
-ha	-sg-	-a	-vhn-	-di	1	3	yes
-ʔa	-sg-	-ø	-s-	-sdi	1	1	no

Only 31 percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Fourty-four percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 51 percent have at least three, 56 percent have at least two, and 90 percent have at least one. Ten percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.7 C: Comparison to the Most Frequent Pattern of Class VII

5	4+	3+	2+	1+	0
12/39	17/39	20/39	22/39	35/39	4/39
31%	44%	51%	56%	90%	10%



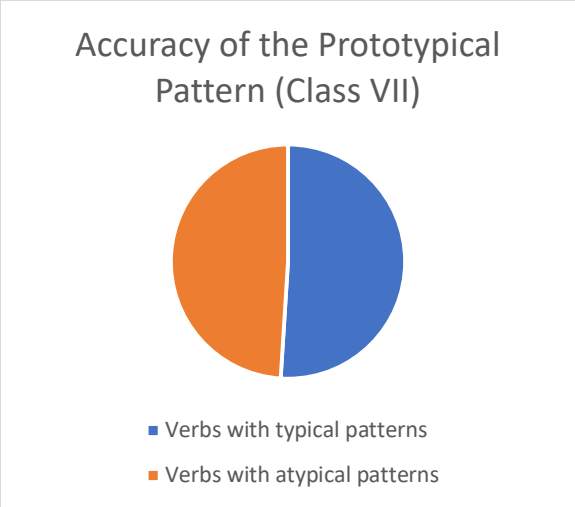


Table 4.7 D: Example with [li] (Feeling 1975:47)

Stem Suffix Category	Cherokee	English
PRC	asdeliha	He's helping.
INC	asdelisgoʔi	He was helping.
IMM	asdela	He (just) helped.
CMP	asdelvʔi	He helped.
INF	asdelisdi	for him to help

Table 4.7 E: Example with [ti] (Feeling 1975:18)

Stem Suffix Category	Cherokee	English
PRC	agowhtiha	He sees it.
INC	agowhtisgoʔi	He was seeing it.
IMM	agowhta	He (just) say it.
CMP	ugohvʔi	He saw it.
INF	ugowhtvhdi	for him to see it

Table 4.7 F: Example with [yi] (Feeling 1975:13)

Stem Suffix Category	Cherokee	English
PRC	adloyiha	He's crying.
INC	adloyihoʔi	He was crying.
IMM	adloyiga	He (just) cried.
CMP	adloyilvʔi	He cried.
INF	adloyisdi	for him to cry

4.8 Class VIII Verbs

Table 4.8 A shows the prototypical pattern for verbs in Class VIII. Sixty-three out of the 75 verbs in this class fit this pattern. Eighty-four percent of the verbs in Class VIII have patterns that are represented by this one.

Table 4.8 A: The Prototypical Pattern of Class VIII

PRC	INC	IMM	CMP	INF
-sga	-sg-	-ga/-ʔvga/-na	-an-/-n-/-hn-	-di/-hdi/-sdi/-tdi/ -kdi/-ohdi/-nhdi

Class VIII verbs have root-final syllables that end in [dv], [hlu], [hv], [lv], [nv], [tv], and [ʔv]. There are 75 verbs from my data that belong to this class. The most frequent pattern occurs 32 times. The second most frequent pattern occurs eight times, and it only differs from the stem

suffix forms of the most frequent pattern in the Immediate and the Completive. The third and fourth most frequent patterns also differ only minimally from the most frequent one.

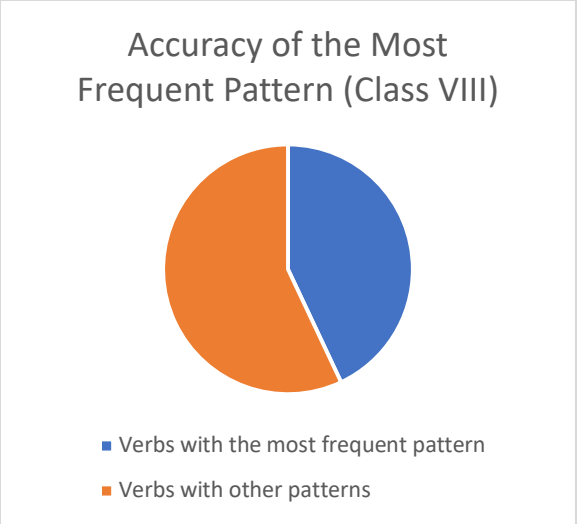
Table 4.8 B: Class VIII Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-sga	-sg-	-ga	-an-	-di	32	5	yes
-sga	-sg-	-ʔvga	-n-	-di	8	3	yes
-sga	-sg-	-na	-(h)n-	-(h)di	5	3	yes
-sga	-sg-	-ga	-an-	-sdi	4	4	yes
-sga	-sg-	-ga	-n-	-tdi	4	3	yes
-sga	-sg-	-hi	-s-	-hisdi	4	2	no
-sga	-sg-	-ga	-n-	-di	3	4	yes
-sga	-sg-	-ga	-in-	-di	2	4	yes
-sga	-sg-	-ga	-n-	-sdi	2	3	yes
-ga	-g-	-gi	-j-	-sdi	2	0	no
-ga	-g-	-gi	-g-	-ʔisdi	2	0	no
-ga	-g-	-gi	-j-	-ysdi	2	0	no
-sga	-sg-	-ga	-n-	-kdi	1	3	yes
-sga	-sg-	-ga	-n-	-ohdi	1	3	yes
-sga	-sg-	-na	-hn-	-nhdi	1	2	yes
-sga	-sg-	-la	-s-	-sdi	1	2	no
-ʔa	-sg-	-na	-s-	-sdi	1	1	no

Fourty-three percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Fifty-five percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern, whereas 83 percent have at least three, 91 percent have at least two, and 92 percent have at least one. Eight percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.8 C: Comparison to the Most Frequent Pattern of Class VIII

5	4+	3+	2+	1+	0
32/75	41/75	62/75	68/75	69/75	6/75
43%	55%	83%	91%	92%	8%



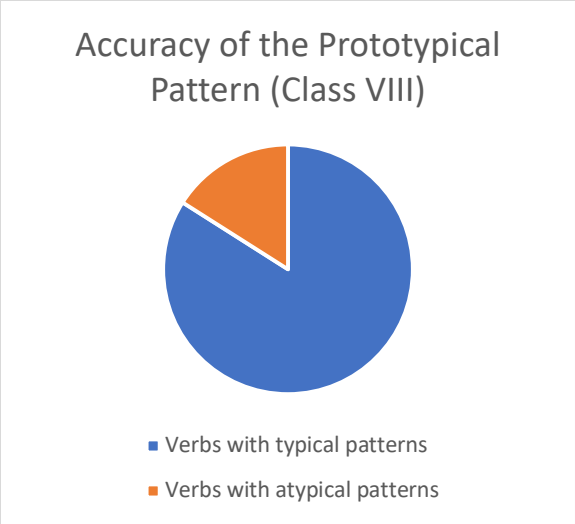


Table 4.8 D: Example with [dv] (Feeling 1975:29)

Stem Suffix Category	**Cherokee**	**English**
PRC	ahyvhgwidvsga	He is bending it.
INC	ahyvhgwidvsgoʔi	He was bending it.
IMM	ahyvhgwidvʔvga	He (just) bent it.
CMP	ahyvhgwidvnvʔi	He bent.
INF	ahyvhgwidvdi	for him to bend it

Table 4.8 E: Example with [hlu] (Feeling 1975:42)

Stem Suffix Category	**Cherokee**	**English**
PRC	alsdvhlusga	He is taking a seat.
INC	alsdvhlusgoʔi	He was taking a seat.
IMM	alsdvhluga	He (just) took a seat.
CMP	alsdvhlunʔi	He took a seat.
INF	alsdvhlusdi	for him to take a seat

Table 4.8 F: Example with [hv] (Feeling 1975:23)

Stem Suffix Category	**Cherokee**	**English**
PRC	ahltelvhvsga	He's moving.
INC	ahltelvhvsgoʔi	He was moving.
IMM	ahltelvhvga	He (just) moved.
CMP	uhltelvhnvʔi	He moved.
INF	uhltehldi	for him to move

Table 4.8 G: Example with [lv] (Feeling 1975:72)

Stem Suffix Category	Cherokee	English
PRC	alasuhlvsga	He's putting on shoes.
INC	alasuhlvsgoʔi	He was putting on shoes.
IMM	alasuhlvga	He (just) put on shoes.
CMP	alasuhlanvʔi	He put on shoes.
INF	alasuhlvdi	for him to put on shoes

Table 4.8 H: Example with [nv] (Feeling 1975:30)

Stem Suffix Category	Cherokee	English
PRC	ajanvsga	He's dressing up.
INC	ajanvsgoʔi	He was dressing up.
IMM	ajanvna	He (just) dressed up.
CMP	ajanvhnvʔi	He dressed up.
INF	ajanvhdi	for him to dress up

Table 4.8 I: Example with [tv] (Feeling 1975:71)

Stem Suffix Category	Cherokee	English
PRC	daktinvtvsga	He is putting on glasses.
INC	daktinvtvsgoʔi	He was putting on glasses.
IMM	daktinvtvga	He (just) put on glasses.
CMP	daktinvtanvʔi	He put on glasses.
INF	daktinvtvdi	for him to put on glasses

Table 4.8 J: Example with [ʔv] (Feeling 1975:61)

Stem Suffix Category	Cherokee	English
PRC	atsgoʔvsga	He is kissing it.
INC	atsgoʔvsgoʔi	He was kissing it.
IMM	atsgoʔvga	He (just) kissed it.
CMP	atsgoʔvnvʔi	He kissed it.
INF	atsgoʔvdi	for him to kiss it

4.9 Class IX Verbs

Table 4.9 A shows the prototypical pattern for verbs in Class IX. Six out of nine verbs in this class fit this pattern. Sixty-seven percent of the verbs in Class IX have patterns that are represented by this one.

Table 4.9 A: The Prototypical Pattern of Class IX

PRC	INC	IMM	CMP	INF
-sga	-sg-	-la	-s-	-sdi

Class IX verbs have root-final syllables that end in [go]. There are nine verbs from my data that belong to this class. The most frequent pattern occurs six times, and the other two patterns are exceptions. This is a very small class, but it is unique in that it takes the form [la] in the Immediate stem suffix category. Class VII verbs have a similar Immediate form, [vla]; however they take [ha], not [sga], in the Present Continuous.

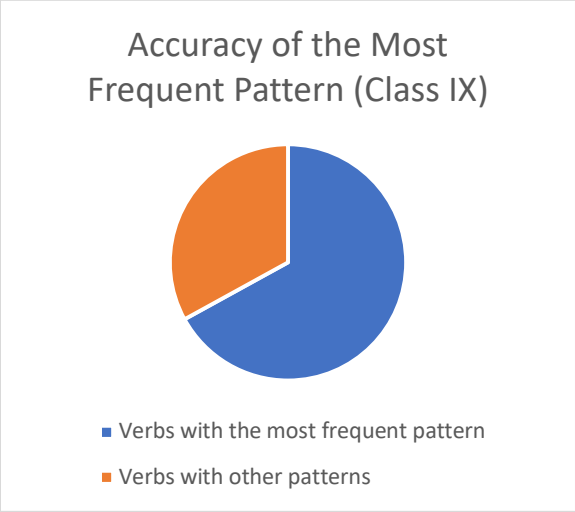
Table 4.9 B: Class IX Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-sga	-sg-	-la	-s-	-sdi	6	5	yes
-ga	-g-	-ʔi	-j-	-sdi	2	1	no
-sga	-sg-	-hi	-s-	-hisdi	1	3	no

Sixty-seven percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Sixty-seven percent of the verbs in this class also have at least four stem suffix forms in common with those of the most frequent pattern; 78 percent have at least three, and 78 percent have at least two. No pattern in this class has five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.9 C: Comparison to the Most Frequent Pattern of Class IX

5	4+	3+	2+	1+	0
6/9	6/9	7/9	7/9	9/9	0/9
67%	67%	78%	78%	100%	0%



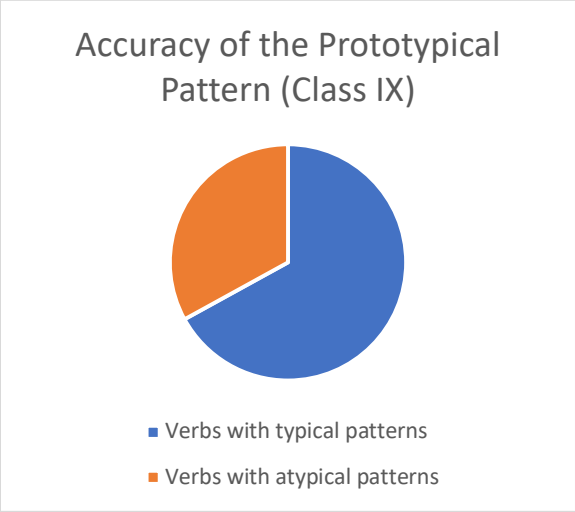


Table 4.9 D: Example with [go] (Feeling:51)

Stem Suffix Category	Cherokee	English
PRC	asgosga	He's digging.
INC	asgosgoʔi	He was digging.
IMM	asgola	He (just) dug.
CMP	usgosvʔi	He dug.
INF	usgosdi	for him to dig

4.10 Class X Verbs

Table 4.10 A shows the prototypical pattern for verbs in Class X. Ten out of 18 verbs in this class fit this pattern. Fifty-six percent of the verbs in Class X have patterns that are represented by this one. Like in the cases of Classes IV, VI, and VII, the prototypical pattern of Class X is a much better representation of the stem suffix forms that the verbs in this class take, than the most frequent pattern is.

Table 4.10 A: The Prototypical Pattern of Class X

PRC	INC	IMM	CMP	INF
-sga/-isga	-sg-	-sa/-a/-ø/-i	-s-	-sdi/-isdi

Class X verbs have root-final syllables that end in the consonants [l], [t], and [w]. There are 18 verbs that belong to this class. The most frequent pattern occurs only five times, but many other patterns only have one stem suffix form that is differs from those of the most frequent pattern. This class has some exceptional patterns that are different from those of the other classes. These patterns have [a] in the Present Continuous, a null form in the Incompletive, a null form in the Completive, and forms that end in [sdi] in the Immediate and the Infinitive. These unusual stem suffix forms could have something to do with the fact that this verb class has root-final syllables that end in consonants rather than vowels.

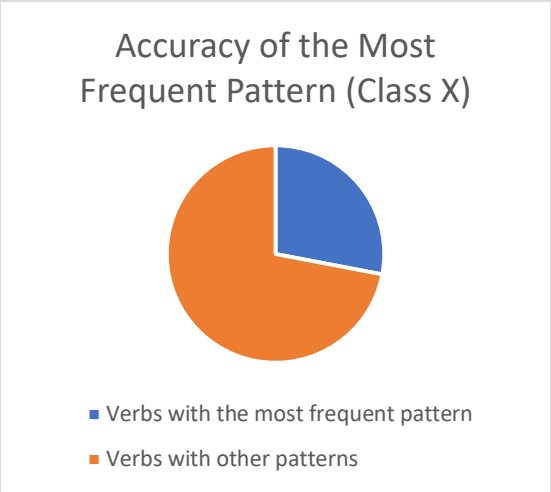
Table 4.10 B: Class X Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-sga	-sg-	-(s)a	-s-	-sdi	5	5	yes
-sga	-sg-	-a	-s-	-isdi	2	4	yes
-a	-ø-	-esdi	-ø-	-di	2	1	no
-sga	-sg-	-ø	-s-	-sdi	1	4	yes
-sga	-sg-	-a	-ø-	-sdi	1	4	no
-isga	-sg-	-a	-s-	-sdi	1	4	yes
-sga	-sg-	-i	-s-	-isdi	1	3	yes
-ga	-g-	-gi	-s-	-sdi	1	2	no
-a	-ø-	-esdi	-ø-	-sdi	1	1	no
-ga	-g-	-la	-j-	-sdi	1	1	no
-ga	-g-	-gi	-s-	-isdi	1	1	no
-a	-ø-	-vga	-ø-	-di	1	0	no

Only 28 percent of the verbs in this class pattern according to the stem suffix forms of the most frequent pattern. Fifty-six percent of the verbs in this class have at least four stem suffix forms in common with those of the most frequent pattern; 61 percent have at least three, 67 percent have at least two and 94 percent have at least one. Six percent of the verbs in this class have patterns with five stem suffix forms that are entirely different from those of the most frequent pattern.

Table 4.10 C: Comparison to the Most Frequent Pattern of Class X

5	4+	3+	2+	1+	0
5/18	10/18	11/18	12/18	17/18	1/18
28%	56%	61%	67%	94%	6%



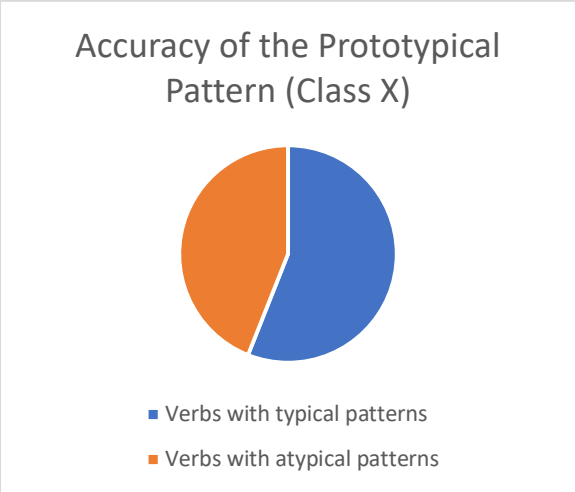


Table 4.10 D: Example with [l] (Feeling 1975:60)

Stem Suffix Category	Cherokee	English
PRC	atolsga	He's borrowing it.
INC	atolsgoʔi	He was borrowing it.
IMM	atola	He (just) borrowed it.
CMP	atolsvʔi	He borrowed it.
INF	atolisdi	for him to borrow it

Table 4.10 E: Example with [t] (Feeling 1975:27)

Stem Suffix Category	Cherokee	English
PRC	ahyahketsga	He's peeling it.
INC	ahyahketsgoʔi	He was peeling it.
IMM	ahyahketsa	He (just) peeled it.
CMP	uhyahketsvʔi	He peeled it.
INF	uhyahketsdi	for him to peel it

Table 4.10 F: Example with [w] (Feeling 1975:160)

Stem Suffix Category	Cherokee	English
PRC	udiwsga	He's getting better.
INC	udiwsgoʔi	He was getting better.
IMM	udiwi	He (just) got better.
CMP	udiwsvʔi	He got better.
INF	udiwisdi	for him to get better

4.11 Class XI Verbs

Class XI is the smallest class, and it is a tentative class, because there are only four verbs from my data that belong to this class. These verbs are different from the other classes, because their root-final syllables end in [sa] and [ta]. There are no other classes whose verbs have root-final syllables that end in the vowel [a]. The combination of [sga] in the Present Continuous with a null form in the Immediate and [h] in the Completive is unique to this class.

Table 4.11 A: The Prototypical Pattern of Class XI

PRC	INC	IMM	CMP	INF
-sga	-sg-	-ø	-h-	-sdi

Table 4.11 B: Class XI Patterns

PRC	INC	IMM	CMP	INF	Frequency	Similarity	Typical
-sga	-sg-	-ø	-h-	-sdi	4	5	yes

There is no need to provide Table C for this class. One hundred percent of the verbs in this class take the stem suffix forms of the most frequent pattern, which is the only pattern given for this class.

Table 4.11 D: Example with [sa] (Feeling 1975:128)

Stem Suffix Category	**Cherokee**	**English**
PRC	gvnosasga	He's sweeping.
INC	gvnosasgoʔi	He was sweeping.
IMM	gvnosa	He (just) swept.
CMP	gvnosahvʔi	He swept.
INF	gvnosasdi	for him to sweep

Table 4.11 E: Example with [ta] (Feeling 1975:11)

Stem Suffix Category	**Cherokee**	**English**
PRC	aditasga	He's drinking.
INC	aditasgoʔi	He was drinking.
IMM	adita	He (just) drank.
CMP	uditahvʔi	He drank.
INF	uditasdi	for him to drink

4.12 Cook's Verb Classes

In his 1979 dissertation, *A Grammar of North Carolina Cherokee*, Cook presents seven verb classes labeled A through G. Classes A through D have four or five subclasses each, while Classes E through G have no subclasses. Counting each subclass, Cook presents 22 different patterns in total. Cook's classes can be identified by the phonological features of the final phoneme of the verb root; he breaks up his classes by root-final consonants and vowels. Each vowel is included in more than one class; vowels are sorted by their properties, such as length and tone. Some consonants are also included in more than one class, or occur in more than one consonant cluster. Table 3A is given again for reference.

Table 3A: Cook's Cherokee Verb Classes (Cook 1979:98)

Class	Root Finals	PRC	INC	IMM	CMP	INF
A1	t, k, y, ts	-iʔ-	-ʔíhsk-	-a	-ʔ-	-ʔihst-
A2	t, k, l, w	-iʔ-	-iʔsk-	-aʔka	-aʔn-	-oʔt-
A3	hs, st, ht, ʔt	-ih-	-ihsk-	-a	-ahn-	-oht-
A4	t, l, n, y, ts, th, hs	-ih-	-ihsk-	-a	-vh-	-vht-
B1	e	-h-	-hsk-	-v:li	-h-	-hst-
B2	e	-ʔ-	-ʔsk-	-a	-ʔ-	-ʔst-
B3	o:	-ʔ-	-sk-	-tsa	-ʔ-	-st-
B4	v:	-ʔ-	-sk-	-na	-s-	-st-
B5	i:	-ʔ-	-sk-	-ø	-s-	-st-
C1	v, á, ó, u	-hsk-	-hsk-	-hi	-hs-	-hihst-
C2	a, i	-hsk-	-hsk-	-ø	-hs-	-hst-
C3	ya, la, na, ha	-hsk-	-hsk-	-ø	-h-	-hst-
C4	ʔn	-hsk-	-hsk-	-ʔka	-ø-	-ʔt-
C5	hn	-hsk-	-hsk-	-ʔka	-ø-	-ht-
D1	é	-h-	-hsk-	-v:li	-hl-	-ht-
D2	ó, v	-hih-	-hih-	-ha:ʔka	-hl-	-hst-
D3	é, ó	-hih-	-hih-	-:ka	-hl-	-hst-
D4	l, n, y	-hih-	-hih-	-hka	-hl-	-hst-
D5	l, n, a:, i:, v:	-ʔih-	-ʔih-	-ʔka	-ʔl-	-ʔst-
E	e:, o:, i:, v:, h, ʔ	-k-	-k-	-ki	-ts-	-ihst-
F	h, n, l, y, ʔ, ts, ths	-i	-i:s-	no entry	no entry	no entry
G	y, l, h, ʔ, hl	-ø-	-ø-	no entry	no entry	no entry

All of the verbs in Cook's Class A have root-final consonants. Each subclass patterns with a laryngeal in at least four out of the five of the stem suffix categories; in most categories this is a glottal stop. Cook defines verbs with root-final consonants differently than I do. For example, the root for the verb 'to plow' is given by Cook as [taluk], whereas I give the same root as [dalugi]. Besides the differences in voicing of the alveolar and velar stops, the roots are the same. The difference is that I have included the vowel [i] as part of the verb root, and Cook has not. This makes our stem suffix patterns look slightly different. Additionally, Cook does not take [a] to be a part of the stem suffix in the Present Continuous. Instead, he takes it to be a final suffix, so he excludes it from the Present Continuous form, whereas I include the [a] in the Present Continuous form.

Table 4.12 A: Cook's Class A

Subclass	**Root-Final**
A1	t, k, y, ts
A2	t, k, l, w
A3	h, st, ht, ʔt
A4	t, l, n, y, ts, th, hs

Like I mentioned above, I took the vowel [i], in the Present Continuous and the Incompletive, to be a part of the verb root. It is still part of the verb root in the last three stem suffix categories, but it is cancelled out by the new vowel since two vowels cannot be next each other in Cherokee. Cook's Class A pattern has laryngeals where my pattern does not, which could be explained by the fact that we are working with different sets of data as well as with different dialects of Cherokee. The Class A subclasses pattern similarly to one another with many stem suffix forms spanning across the different subclasses.

Table 4.12 B: The stem suffixes of 'to plow'

Stem Suffix Category	**Cook's Pattern**	**My Pattern**
PRC	-iʔ	-ʔa
INC	-iʔsk-	-sg-
IMM	-vʔka	-vga

CMP	-aʔn-	-an-
INF	-oʔti	-odi

All of the verbs in Class B have root-final vowels. Subclasses B3, B4, and B5 have root-final long vowels. Here, Cook distinguishes vowels by length, whereas I distinguish vowels by the consonant that comes before them. The Class B subclasses pattern similarly in every stem suffix category but in the Immediate. Here, Cook seems to focus more on the phonological shape of the root-final (a lengthened vowel) than the similarity of the forms in the Immediate, whereas many of my classes were distinguished based on the similarity of the forms in the Immediate. I found it important to distinguish based on these forms, because they stand out more than the stem suffix forms of the Present Continuous, the Incompletive, and the Infinitive. For example, the Incompletive stem suffix takes one of two forms: [h] or [sg]. It is impossible to classify verbs into more than two categories if the only way to classify them is based on their stem suffix forms in the Incompletive. However, it is possible to classify verbs into many categories based on their forms in the Immediate. Subclasses B4 and B5 have [s] in the Completive, which is different from each of the other subclasses. In my verb classes, verbs in these subclasses are grouped into separate classes, with the distinguishing factor being the Completive form. Again, I found it important to distinguish based on the form in the Completive because it is more unique than the forms in the Present Continuous, the Incompletive, and the Infinitive.

Table 4.12 C: Cook's Class B

Subclass	**Root-Final**
B1	e
B2	e
B3	o:
B4	v:
B5	i:

All of the verbs in Class C and Class D have root-final vowels or resonants. Subclass C1 has three root-final vowels with tone: [v], [a], and [o]. Subclasses B1, B2, and B3 also have three root final vowels with tone: [e], [o], and [v]. In my classes, I distinguish these vowels based on the consonants that precede them instead of by their tonal property; it is simpler for a second language learner to distinguish them this way. Each subclass of Class C has identical forms in the Present Continuous and the Incompletive. The forms vary in the Immediate and the Completive which would have been a reason for me to sort those verbs into separate classes. Class D verbs have similar forms in each stem suffix category, and the identical form [hl] in the Immediate.

Table 4.12 D: Cook's Class C

Subclass	**Root-Final**
C1	v, á, ó, u
C2	a, i
C3	ya, la, na, ha
C4	ʔn
C5	hn

Table 4.12 E: Cook's Class D

Subclass	**Root-Final**
D1	é
D2	ó, v
D3	é, ó
D4	l, n, y
D5	l, n, a:, i:, v:

All of the verbs in Class E have root-final vowels or laryngeals. This class's pattern is similar to a pattern that occurs as an exceptional pattern in many of my verb classes.

Table 4.12 F: Cook's Class E:

Class	**Root-Final**
E	e:, o:, i:, v:, h, ʔ

Table 4.12 G: Cook's Class E Pattern

Stem Suffix Category	**Cook's Pattern**	**My Pattern**
PRC	-k	-ga

INC	-k-	-g-
IMM	-ki	-gi
CMP	-ts-	-j-
INF	-ihsti	-ʔisdi

All of the verbs in Class F have root-final consonants or laryngeals. These verbs are characterized by being "verbs of motion" (Cook 1979:116). Cook notes that, "their present is formed with the suffix [i] "motion" rather than the suffix [a] "indicative" (Cook 1979:116). I did not include any of these verbs in my dataset, nor did I include them in my verb classes, because none were included in Feeling's dictionary.

Table 4.12 H: Cook's Class F

Class	**Root-Final**
F	h, n, l, y, ʔ, ts, ths

All of the verbs in this class have root-final consonants and resonants. These verbs are characterized by having [a] in the Present Continuous, with no preceding [ʔ], [h], or [sg]. They take a null form in the Incompletive. A couple of patterns like this occur as exceptions in my Class X, but I did not constitute them as a separate class because I did not have enough data on verbs that patterned that way to do so.

Table 4.12 I: Cook's Class G

Class	**Root-Final**
G	y, l, h, ʔ, hl

Cook's verb classes do a good job of categorizing some of the exceptional patterns found in my data; however, my classes do a better job than Cook's at predicting forms in the Immediate and Completive categories. In order to easily understand and apply Cook's paradigm, one would have to be able to identify the linguistic properties of vowels and consonants; therefore, Cook's classes are most beneficial to learners of Cherokee who have an extensive knowledge of linguistics, but his paradigm is not one that would be easy for L2 Cherokee learners with little or no knowledge of linguistics to remember.

4.13 King's Verb Classes

King's eleven verb classes are based off of data from over 600 verbs and are presented in his dissertation, *A Grammar and Dictionary of the Cherokee Language*. Including subclasses and minor subclasses, King identifies 28 different patterns for the five stem suffix categories. The following are the criteria for determining each class, subclass, and minor subclass, taken from King 1975, page 78:

1. "Verbs sharing the same present aspect suffix as well as either the imperfective or perfective suffix are grouped in the same major category". These are labeled with Roman numerals I through XI. King uses the terms "imperfective" and "perfective" to label the Incompletive and Completive stem suffix categories.
2. "Verbs sharing at least four of the five suffixes are grouped together in the same subclass". These are labeled with a Roman numeral, followed by a lower case letter .
3. "Verbs sharing all five suffixes are grouped in a minor subclass, if they also share four suffixes with the other verbs (in that same class)." These are labeled with Roman numerals, followed by a lower case letter, as well as a number written in subscript.

Additionally, the verbs King used were considered regular if "they shared the same aspect suffixes with three or more other verbs" (King 1975:78). Irregular verbs "have one or more irregular suffixes or else draw their suffixes from more than one category"; these are not included in King's verb classes (King 1975:78).

King's verb classes are included here, as they were above, in table 3B.

Table 3B: King's Cherokee Verb Classes (King 1975:78-79)

Class	Root Finals	PRC	INC	IMM	CMP	INF
Ia	i	-ʔ-	-sk-	-ø	-ʔs-	-ʔst
Ib	o	-ʔ-	-sk-	-tsa	-ʔ-	-ʔst
Ic	v	-ʔ-	-ʔsk-	-na	-ʔ-	-ʔst
Id	e	-ʔ-	-sk-	-*a	-ʔ-	-ʔt
IIa	ye, le	-h-	-hsk-	-*a	-h-	-ht
IIb	ke, ʔye	-h-	-hsk-	-*v:li	-h-	-ht
IIc	he	-h-	-hsk-	-*v:li	-hl-	-ht
IIIa$_1$	vʔv	-hsk-	-hsk-	-ʔka	-*n-	-*t
IIIa$_2$	uhv, vhv, ohv	-hsk-	-hsk-	-ʔka	-*n-	-@ht
IIIa$_3$	ahv	-hsk-	-hsk-	-ʔka	-*n-	-@oht
IIIb	a	-hsk-	-hsk-	-ʔka	-n-	-*ø
IIIc$_1$	o, u, a	-hsk-	-hsk-	-hi	-hs-	-hihst
IIIc$_2$	i:w	-hsk-	-hsk-	-hi	-hs-	-hst
IVa	ht, ʔt, kt, st	-ih-	-ihsk-	-a	-han-	-oht
IVb	n, l, s, y, t, th, ts	-ih-	-ihsk-	-a	-vh-	-ht
Va	no entry	-iʔ-	-ihsk-	-a	-vʔ-	-ht
Vb	t, k, ts	-iʔ-	-ihsk-	-a	-ʔn-	-ihst
Vc	no entry	-iʔ-	-ihsk-	-a:ʔka	-aʔn-	-oʔt
VIa$_1$	hk	-ih-	-ih-	-ka	-il-	-st
VIa$_2$	h, ʔ	-ih-	-ih-	-ka	-l-	-st
VIIa$_1$	yo(l), yo	-hih-	-hih-	-haʔka	-hl-	-hst
VIIa$_2$	yo(l), yo	-hih-	-hih-	-ka	-hl-	-hst
VIIIa	e, o, u	-k-	-k-	-ʔki	-ʔts-	-ʔihst
VIIIb	h, ʔ	-k-	-k-	-ki	-ts-	-ihst
IXa	to	-h-	-h-	-*a	-ʔl	-*aʔst
IXb	to	-h-	-h-	no entry	no entry	no entry
X	c	-i#	-i:s-	-u:ʔka	-eʔs-	-vʔst
XI	no entry	no entry	no entry	-e:sti	-e:st-	-e:st

King's classes are similar to Cook's in that they can be grouped based off of a verb root's final consonant, consonant cluster, or vowel. Some classes are based on root-final syllables, as is the case with my classes. The verbs in Class I all have root-final vowels and share the same suffixes in the Present Continuous, the Incompletive, and the Completive. Something King didn't do is note that some of his verb classes show patterns that are determined by certain derivational suffixes. These are the suffixes explained in Section 2.4 and Section 3.3; one of these suffixes is the repetitive suffix. Here, subclass Ib is the pattern for verbs that take the repetitive suffix.

Table 4.13 A: King's Class I

Subclass	**Root-Final**
Ia	i
Ib	o
Ic	v
Id	e

King's Class II is very similar to my Class VI. The verbs in Class II have root-final syllables ending in [e]. Four root-final syllables from King's class match those of my Class VI verbs: [ye], [ke], [ʔe], and [he]. I included the fifth root-final syllable, [le], in Class IV instead. The patterns for each of these subclasses match every category of the other subclasses, except for in the Completive.

Table 4.13 B: King's Class II

Subclass	**Root-Final**
IIa	ye, le
IIb	ke, ʔe
IIc	he

The first three minor subclasses of this class have verbs with root-final syllables ending in [v]. These minor subclasses pattern like the verbs in my Class VIII and also have roots that are phonologically similar to the verb roots Class VIII.

Table 4.13 C: King's Class III

Subclass	Root-Final
IIIa$_1$	vʔv
IIIa$_2$	uhv, uhv, vhv, ohv
IIIa$_3$	ahv
IIIb	a
IIIc$_1$	o, u, a
IIIc$_2$	i:w

Subclass IIIb is similar to the pattern of the first three minor subclasses, but differs in the Perfective. The last two minor subclasses pattern like one of the exceptional patterns that occurred in almost every class of my data. That pattern is shown below (King 1975:78).

Table 4.13 C: Pattern of Subclass IIIb

Stem Suffix Category	King's Pattern	My Pattern
PRC	-hsk	-sga
INC	-hsk-	-sg-
IMM	-hi	-hi
CMP	-hv-	-s-
INF	-hihst	-hisdi

The verbs in Class IV have root-final syllables ending in consonants. Like Cook, King does not include the vowel [i] as part of the verb root, but I do. In my verb classes, these verbs would not have root-final syllables that end in consonants but ones that end in [i]. Therefore, the verbs in King's Class IV correspond to the verbs in my Class VII. Class VII verbs have root-final syllables [li], [ti], [and yi]. The patterns of King's Class IV and my Class VII match up, although King's class is larger than mine.

Table 4.13 D: King's Class IV

Subclass	Root-Final
IVa	ht, ʔt, kt, st
IVb	n, l, s, y, t, th, ts

King does not specify what root-final sounds the verbs in subclasses Va and Vc take. The verbs in subclass Vb have root-final syllables ending in [t], [k], and [ts]. The patterns for these

subclasses match the patterns found in my Class IV, which includes verbs with root-final syllables [le], [de], [te], [ne], and [we].

Table 4.13 E: King's Class V

Subclass	Root-Final
Va	no entry
Vb	t, k, ts
Vc	no entry

The verbs in Class VI have root-final syllables ending in [hk], [h], and [ʔ]. They pattern like the verbs in my Class V. This is one of the only classes, in my classes and in King's classes, with [h] in the Incompletive.

Table 4.13 F: King's Class VI

Subclass	Root-Final
VIa$_1$	hk
VIa$_2$	h, ʔ

Like the previous class, the verbs in Class VII pattern with the verbs of my Class V. The root-final syllables from that class are [hi], [ni], and [yo]. My Class V combines King's Class VI and Class VII. The differences between the patterns in King's Classes VI and VII are shown below.

Table 4.13 G: King's Class VII

Subclass	Root-Final
VIIa$_1$	yo(l), yo
VIIa$_2$	yo(l), yo

Table 4.13 H: King's Class VI and Class VII Patterns

Stem Suffix Category	King's Class VI Pattern	King's Class VII Pattern	My Class V Pattern
PRC	-ih	-hih	-(hi)ha
INC	-ih-	-hih-	-(hi)h-
IMM	-ka	-haʔka	-ga
CMP	-il-	-hl-	-(h)l-
INF	-sti-	-hsti	-sdi

The verbs in Class VIII have root-finals that end in the vowels [e], [o], and [u], as well as glottal sounds [h] and [ʔ]. All of these sounds have been included in one of King's Classes I

through VII, but he doesn't differentiate them based on vowel length or tone like Cook does. This could be confusing for anyone trying to learn what to identify King's verb classes by. The patterns of these subclasses differ by whether or not each stem suffix category has a glottal stop preceding the forms in the Immediate, Completive, and Infinitive.

Table 4.13 I: King's Class VIII

Subclass	**Root-Final**
VIIIa	e, o, u
VIIIb	h, ʔ

The verbs in Class IX have roots that end in [to]. I left verbs like this out of my data because their pattern is determined by the suffix they take: the ambulative suffix. The pattern for verbs that take the ambulative suffix is given below.

Table 4.13 J: King's Class IX:

Subclass	**Root-Final**
IXa	to
IXb	to

Table 4.13 K: Pattern of the Ambulative Suffix

Stem Suffix Category	**Ambulative Suffix Pattern**
PRC	-ha
INC	-h-
IMM	-a
CMP	-l-
INF	-sdi

The verbs in Class X have a root that ends in [c]. It is not clear what sound "c" stands for here. King does not give a description of this sound in his chapter on Cherokee phonology (in his 1975 dissertation), nor does he give a description of it when he gives it as the root-final sound for verbs in Class X. I don't have any verbs that pattern like this in my data. There is no entry for the root-finals of King's Class XI. It's pattern is similar to that of the pattern for King's Class X.

Table 4.13 L: King's Class X and Class XI

Subclass	**Root-Final**
X	c
XI	no entry

King's classes could be improved upon by leaving out the patterns of the verbs with derivational suffixes. The vowels that occur as root-finals in more than one class should be categorized by their length or tone, in the way that Cook categorizes them, or by the consonant that comes before them, in the way that I categorize them. Adding more information to those classes will make them easier for second language learners of Cherokee to remember and learn.

Presenting this information in the form of syllables, instead of in the form of individual phonological segments, could be beneficial to second language learners. Research on the segmentation of German words by L2 learners of German suggests that learners find it easier to identify syllables than to identify individual sounds (Hanulíková et al. 2011:516). This study found that "there was a clear advantage of syllables over single consonants" in the segmentation of non-native words, by L2 learners of German (Hanulíková et al. 2011:516). However, it is likely that the native language of the L2 learner also has an effect on segmentation, because "L1 lexical knowledge about viability of the speech input seems to influence segmentation in a second language" (Hanulíková et al. 2011:516).

4.14 Cherokee Verb Classes Compared to German Strong Verb Classes

The information presented in the charts above for Cherokee verb classes is similar to the information presented by German strong verb classes. There are two types of German verbs: weak/regular verbs, and strong/irregular verbs. Weak verbs do not change their root vowel when they change tense. Strong verbs do change their root vowel when they change tense, and are classified as belonging to a certain class, based on how the root vowel changes. The seven strong verb classes can also be identified by the phonological features of the last phoneme of the verb root. Class I and Class II verbs have roots that end in consonants (Ringe 2017:266). Class III

verbs have roots that end in a consonant cluster (Ringe 2017:269). Most verbs that belong to Class IV have roots ending in sonorants, whereas Class V verbs have roots ending in obstruents (Ringe 2017:271). Many Class VI verbs have roots with root vowel *-a-*, followed by a consonant (Ringe 2017:275). Class VII is described as a "residual class," containing verbs that retained the process of reduplication for the formation of simple past tense forms in Proto-Germanic (Ringe 2017:277). Below are the German strong verb classes and examples of verbs from each class. The classes show how the verbs pattern in four tense and number categories: the present tense, the present tense second and third persons, the simple past, and the past participle. There are several different orders in which different authors present German strong verb classes; the following are in the order in which Ringe 2017 gives them.

Table 4.14 A: Class I Patterns

Class I	**Pattern 1**	**Pattern 2**
Present Tense	-ei-	-ei-
Present Tense 2nd and 3rd Persons	-ei-	-ei-
Simple Past	-ie-	-i-
Past Participle	-ie-	-i-

Table 4.14 B: Class I example (Pattern 1)

Present Tense	ich bleibe	I stay
Present Tense 2nd and 3rd Persons	du bleibst/er bleibt	you stay/he stays
Simple Past	ich blieb	I stayed
Past Participle	bin geblieben	have stayed

Table 4.14 C: Class II Patterns

Class II	**Pattern 1**	**Pattern 2**	**Pattern 3**
Present Tense	-ie-	-au-	-ü-
Present Tense 2nd and 3rd Persons	-ie-	-äu-/-au-	-ü-
Simple Past	-o-	-o-	-o-
Past Participle	-o-	-o-	-o-

Table 4.14 D: Class II example (Pattern 1)

Present Tense	Ich fliege	I fly
Present Tense 2nd and 3rd Persons	du fliegst/er fliegt	you fly/he flies
Simple Past	ich flog	I flew
Past Participle	bin geflogen	have flown

Table 4.14 E: Class III Patterns

Class III	**Pattern 1**	**Pattern 2**	**Pattern 3**
Present Tense	-i-	-i-	-i-
Present Tense 2nd and 3rd Persons	-i-	-i-	-i-
Simple Past	-a-	-a-	-o-
Past Participle	-u-	-o-	-o-

Table 4.14 F: Class III example (Pattern 1)

Present Tense	ich singe	I sing
Present Tense 2nd and 3rd Persons	du singst/er singt	you sing/he sings
Simple Past	ich sang	I sung
Past Participle	habe gesungen	have sung

Table 4.14 G: Class IV Patterns

Class IV	**Pattern 1**	**Pattern 2**	**Pattern 3**
Present Tense	-e-	-o-	-ä-
Present Tense 2nd and 3rd Persons	-i-	-o-	-ie-
Simple Past	-a-	-a-	-a-
Past Participle	-o-	-o-	-o-

Table 4.14 H: Class IV example (Pattern 1)

Present Tense	ich spreche	I speak
Present Tense 2nd and 3rd Persons	du sprichst/er spricht	you speak/he speaks
Simple Past	ich sprach	I spoke
Past Participle	habe gesprochen	have spoken

Table 4.14 I: Class V Patterns

Class V	**Pattern 1**	**Pattern 2**
Present Tense	-e-	-i-/-ie-
Present Tense 2nd and 3rd Persons	-i-	-i-/-ie-
Simple Past	-a-	-a-
Past Participle	-e-	-e-

Table 4.14 J: Class V example (Pattern 1)

Present Tense	ich gebe	I give
Present Tense 2nd and 3rd Persons	du gibst/er gibt	you give/he gives
Past Tense	ich gab	I gave
Past Participle	habe gegeben	have given

Table 4.14 K: Class VI Patterns

Class VI	**Pattern 1**	**Pattern 2**	**Pattern 3**
Present Tense	-a-	-e-	-ö-
Present Tense 2nd and 3rd Persons	-ä-	-e-	-ö-
Simple Past	-u-	-o-	-o-
Past Participle	-a-	-o-	-o-

Table 4.14 L: Class VI example (Pattern1)

Present Tense	ich fahre	I drive
Present Tense 2nd and 3rd Persons	du fährst/er fährt	you drive/he drives
Simple Past	ich fuhr	I drove
Past Participle	bin gefahren	have driven

Table 4.14 M: Class VII Patterns

Class VII	**Pattern 1**	**Pattern 2**
Present Tense	-a-	-au-
Present Tense 2nd and 3rd Persons	-ä-	-äu-
Simple Past	-ie-	-ie-
Past Participle	-a-	-a-

Table 4.14 N: Class VII example (Pattern 1)

Present Tense	ich fange	I catch
Present Tense 2nd and 3rd Persons	du fängst/er fängt	you catch/he catches
Simple Past	ich fing	I caught
Past Participle	habe gefangen	have caught

German strong verb classes provide learners with easily identifiable categories of verbs that are classified by similar patterns in different tense and number categories. This is what I wanted to achieve for Cherokee, and that is why I chose German strong verb classes to be a model for what I wanted to create. My verb classes are similar to those of German in that they are easily identifiable by the phonological shape of the verb root. For example, German Class IV verbs have roots that end in sonorants, and my Class IV verbs have roots that end in syllables [le], [de], [ne], [we], and [te]. Each German verb class has multiple patterns. The patterns differ from each other in certain categories, but are identical to each other in other categories. For example, Class I has two patterns: one that has [ie] as the stem vowel in the Simple Past and Past Participle categories, and one that has [i] as the stem vowel in those categories, but both patterns have [ei] as the stem vowel in both Present Tense categories. It is logical that these patterns belong to the same class; they are not identical, but they are not different enough from one another to be placed in separate classes. I used the same principle for grouping verb patterns

together when creating verb classes for Cherokee. For example, as shown below, two patterns in Class VI have identical forms in four out of five of the stem suffix categories, but the patterns differ in the Immediate stem suffix category.

Table 4.14 O: The Cherokee equivalent to a German strong verb class

Class VI	**Pattern 1**	**Pattern 2**
Present Continuous	-ha	-ha
Incompletive	-sg-	-sg-
Immediate	-vla	-a
Completive	-h(l)-	-h-
Infinitive	-hdi	-hdi

SECTION 5: SECOND LANGUAGE PEDAGOGY AND LANGUAGE REVITALIZATION

The main purpose of this project is to give educators a tool for teaching verbs to second language learners of Cherokee. As a language that has not been systematically studied, Cherokee does not have a wealth of teaching materials for its grammar. Students learning Cherokee verbs must memorize a verb as well as individually memorize the verb's form in each of the five stem suffix categories. In contrast to this, German is a language that has been studied extensively, with a wealth of literature on its grammar and plenty of teaching materials that have been tested in L2 classrooms. Because I wanted to present information about Cherokee verbs that was similar to the information presented by German verb classes, I chose to use German verb classes as a model to work off of in order to create teaching materials for Cherokee verbs.

The more extensively Cherokee is studied, the more effective Cherokee teaching materials will become. Verbs, in particular, are an important aspect of this research because they present an area of L2 learning that has not been studied as intensely as other aspects of Cherokee such as pronominal prefixes or nouns. Additionally, there is a dearth of literature on L2 learners' experiences learning verbs in languages with verb systems comparable to that of Cherokee. Those languages which have been extensively researched do not have verb systems like that of Cherokee. My goal has been to apply a successful verb class model to Cherokee and to contribute to the creation of teaching materials for verbs which can be put to use in L2 classrooms.

A popular teaching model in today's L2 classrooms is Communicative Language Teaching (CLT). The main goal of CLT is to develop proficiency and competence in communication in the L2 (Savignon 1997:10). This goal is accomplished through classroom

activities that model realistic communicative situations in the L2. Activities are done working in pairs or groups, and consist of communicative tasks that promote creativity, collaboration, and fluency (Mitchell 1988:59-60). To get the most out of activities such as these, students should be able to quickly access information about the grammar of the language in order to use it and to practice in the L2. Having verb classes for Cherokee is important to this endeavor, because they minimize the amount of information a student must memorize. It is much more efficient to memorize several verb classes, and how to identify the verbs that belong to them, than to memorize every Cherokee verb and each of its five stem suffix forms.

A study done by Aline Godfroid and Maren S. Uggen on L2 learners of German focuses on "beginning second language learner's attention to irregular verb morphology" which, in German, is equivalent to strong verb morphology (Godfroid and Uggen 2013:291). The goal of the study was to discover the effects of learners' attention to strong verb forms and what prompted them to pay attention to those verb forms. Godfroid and Uggen state that "within the field of SLA, attention is believed to enhance learning because it leads to noticing" (Godfroid and Uggen 2013:293). However, "without prior instruction about a new target form, L2 learners may not even realize that the form exists and, therefore, may fail to attend to this dimension of the language input" (Godfroid and Uggen 2013:293). They go on to explain that a lack of proper instruction will cause the learner to have issues processing verbs, causing them to "process and store the irregular verb forms as unanalyzed chunks, akin to lexical items, in their mental lexicons" (Godfroid and Uggen 2013:297). This suggests that providing an instructional paradigm for Cherokee verbs is important to a second language learner's education. In fact, the absence of Cherokee verb classes could impede the language-learning process. Godfroid and Uggen's study concludes, that "attention increases were shown to underlie modest gains in

productive verb knowledge" (Godfroid and Uggen 2013:313). Students with the tools to pay attention to, and to identify, the morphological components of the verbs they are learning will have an increased ability to learn the verbs correctly.

Language revitalization, in the case of Cherokee, is crucial to its survival. Cherokee is labeled as severely endangered, with an estimated 1,000 fluent speakers of the Eastern dialect left in North Carolina and 10,000 fluent speakers of the Western dialect left in Oklahoma (UNESCO). These estimates are likely very generous. In 2005, the Kituwah Preservation and Education Program (KPEP) of the Eastern band of Cherokee funded a survey which indicated that "460 fluent speakers were then living in Cherokee communities, with 72 percent of them over the age of 50" (KPEP). In 2012, KPEP released a report stating that "there are 318 fluent Cherokee speakers left in the Eastern band of Cherokee" (KPEP). It is obvious that the speaker count is declining rapidly, and that seven years after KPEP's 2012 report there are likely fewer, if not far fewer, than 300 speakers left in the Eastern Band. The most effective way to save the language would be for Cherokee families to raise a new generation of native speakers. This proves to be difficult, seeing as there is a generation gap between children today and members of their family who speak Cherokee. As stated above, three-fourths of fluent speakers are above the age of 50, and that is the result of a survey from over a decade ago. The decline of native languages and native culture can be partially attributed to American Indian boarding schools that forced generations of native speakers to abandon their language and culture, so that when they returned home "in some instances they could not speak their own language any longer and found communicating with their families difficult" (Voyer 2007:45). Many parents today, not having been raised speaking Cherokee, do not have the ability to pass it on to their children.

Consequently, the Cherokee cannot rely, at least not solely, on L1 speakers to save their language.

Second language learners of Cherokee are vital to the language revitalization effort. Education goes hand in hand with normalization, which refers to "a previously marginalized language becoming a language found in wide usage" (Valadez 2015:61). A successful model of language revitalization through normalization is that of Basque. Basque is a language, previously forbidden under the rule of dictator Francisco Franco, that is spoken in the Basque Country of Spain (Valadez 2015:62). Basque suffered a sharp decline of speakers in the middle and late 20th century, but has recently been revitalized through the implementation of varying degrees of Basque instruction in schools. Instruction in Basque varies from four to five hours a week to Basque instruction in every subject (Valadez 2015:62). Valadez notes that the "accomplishment of the language revitalization gains can be credited to the efforts in the education system" (Valadez 2015:74). Immersion schools have been the most effective in producing fluent speakers of Basque; those students who attend immersion schools "are the ones who are closer to balanced bilingualism, that is to say, bilinguals with a high level of competence in both languages," with both languages being Basque and Spanish (Lagabaster 2001:415). However, simply requiring the instruction of Basque to be made widely accessible has been a step towards normalizing it (Valadez 2015:74). The Eastern Band of Cherokee has a Cherokee Immersion School called New Kituwah. New Kituwah is completely immersive through grade three, while subsequent grades are taught in English with Cherokee taught as a separate subject. This effort has not been enough to produce new fluent speakers of Cherokee, seeing as the instruction in Cherokee declines significantly after grade three. The implementation of Cherokee immersion in grades four through twelve would likely lead to outcomes similar to those in the Basque region.

Nevertheless, Cherokee should be promoted as a subject matter in schools throughout the Cherokee community, throughout the states of North Carolina and Oklahoma, and even throughout the U.S., because its presence in education does play a significant role in the normalization and revitalization of the language. The implementation of Cherokee as a subject matter in schools across the nation will be aided by the creation of new resources for the instruction of Cherokee. More research on Cherokee will lead to the development of better materials for teachers and students, which will constitute a greater success rate in L2 learners of Cherokee, possibly providing more Cherokee speakers, or even more Cherokee teachers for the future.

SECTION 6: DISCUSSION AND FURTHER RESEARCH

The aim of this project has been to categorize Cherokee verbs in a way that will facilitate the acquisition of verbs by second language learners of Cherokee. I have created eleven verb classes from my data on 357 verbs, but there is more work to be done on the classes I have created. Firstly, more data needs to be collected and analyzed. I have categorized my verb classes based on the results of the data I collected, but a larger amount of data could lead to different results. Additional data should be collected from the Cherokee online searchable dictionary database. This database is the result of years of work by Tim Nuttle, TommyLee Whitlock, Ben Frey, and many others. It is far from complete, but it includes thousands of verb entries from several Cherokee word lists, literary works, and dictionaries. In the case of thousands of verbs, instead of analyzing all of the data by hand, as was my method, it would be necessary to create a computer program that could accurately identify all of the parts of a Cherokee verb. If this data were analyzed, then the results of that analysis would expound upon the work that I have already done.

With more data, it will become clear if the way I have categorized my classes needs to be altered or not. It will also become clear whether or not the verbs designated to certain classes, like Class VII, in which only 51 percent of the verbs fit the prototypical pattern, truly belong to that class, or whether they fit better into another class's pattern. More data is especially needed in order to make strong claims about Class XI, since only four verbs from my dataset fit into the pattern of that class. After collecting additional data and making more progress with this research, the model for Cherokee verb classes should be tested on fluent speakers of Cherokee in order to see if the results of the data line up with the language used by those who speak Cherokee.

Several classes are made up of verbs with phonologically similar root-final syllables, meaning that their root-final syllables end in the same vowel sound. These include Classes I, II, and VII, as well as Classes IV and VI. The patterns of certain verbs within these classes sometimes do not fit the prototypical pattern of that class, but fit the prototypical pattern of another class with phonologically similar verb roots. For example, the Class II verb, with root [sgogi], meaning "to gnaw," fits the most frequent pattern found of Class I verbs. The root-final syllable of this verb suggests that it should pattern with Class II, yet it patterns with Class I. This phenomenon could be explained by changes that have taken place over long periods of time for verbs with the root-final syllable [gi]. Such verbs could have once belonged to Class I, but over many generations, come to pattern with Class II. The verb "to gnaw" could be a remnant of that change. "Languages are pushed to certain shapes due to the way they are passed from generation to generation" (Koellner et al. 2012:3). Speakers learn from the language that the previous generation uses, which they then pass on to the generations that follow (Koellner et al. 2012:3).

Diachronic change likely has a role to play in the formation of the patterns deemed exceptions. A historical analysis of the phonological changes that have been applied to Cherokee verbs would give a better understanding of which sounds and sound segments may have been changed or lost over time. Certain verbs may have lost or changed their root-final syllables, but preserved their patterns. Other verbs may have preserved their root-final syllables, but changed their patterns. If a verb lost the original phonological element that determined it to be in a certain verb class, then speakers might generalize its pattern through the process of analogy. Its stem suffix forms might be generalized to match those of a verb that looks phonologically similar, which would reclassify it. Research on the effects of diachronic change on verb forms in

Cherokee could uncover the answers as to why verbs with exceptional patterns are classified as belonging to a certain class.

In addition to phonological patterns, it is possible that Cherokee verbs could be grouped according to their semantic properties. Further research done on the topic should pay special attention to the semantic properties of verbs with exceptional patterns, because their semantics could have relevance for their classifications. Speakers may overgeneralize certain patterns based on the semantics of a verb, which could account for some of the verbs with exceptional patterns in my data. It is also important to look at high-frequency verbs and their patterns. High-frequency verbs in many languages tend to have irregular inflections, so it is possible that the exceptional patterns found in my data belong to frequently used verbs.

In almost every verb class two exceptional patterns stood out; they did not match the prototypical pattern of any class. Here are the forms of each stem suffix category of these two patterns:

Table 6A: Exceptional Pattern 1

PRC	-sga
INC	-sg-
IMM	-hi
CMP	-s-
INF	-(hi)sdi

Table 6B: Exceptional Pattern 2

PRC	-ga
INC	-g-
IMM	-gi
CMP	-j
INF	-sdi

More research needs to be done on the verbs that pattern this way, in order to determine their significance. I do not have any hypotheses on why certain verbs take either of these patterns, but

it is important to note that 65 percent of the verbs from my data that pattern with the first pattern are intransitive.

My motivation for creating these verb classes was to provide educational resources for teaching Cherokee verbs to L2 Cherokee learners. Because this was my main motivation, I did not examine the phonological features of the stem suffix forms in great detail; in the future it would be beneficial to do so. For example, the Incompletive stem suffix takes one of two forms: either [h] or [sg]. Which of these forms is the underlying one, and what environments does it occur in? This would be a question for the forms found in each stem suffix category, although many of these categories have more than two forms. This research should go hand in hand with research on historical sound changes in Cherokee, which could point to which forms might be the underlying ones.

Lastly, I chose to format my verb classes in a similar way to the format of German strong verb classes. I perceive this model to be one that is helpful to second language learners; however, it is possible that there is a simpler way, or a more logical way, to format Cherokee verb classes. Since there are many morphological differences between German verbs and Cherokee verbs, it could mean that Cherokee verbs will never fit perfectly into verb classes that are modeled after those of German strong verbs. More research should be done on how my verb classes help or hinder students learning Cherokee, and the classes should be revised according to the results of that research.

SECTION 7: CONCLUSION

The language revitalization effort to save Cherokee is urgent. Few native speakers are left who can pass on their language to the children of future generations. The education of Cherokee in schools is vital to this effort but difficult to achieve due a lack of teaching materials. I have focused on creating a resource for teaching verbs to second language learners of Cherokee. My eleven verb classes provide learners with a simple way of identifying how verbs pattern in the five stem suffix categories. Having structure when learning a language is immensely important to the learning process and to the teaching process. Students who are given detailed instruction on Cherokee verbs and how they pattern will learn verb forms with an increased amount of accuracy. My verb classes present different information than the information provided by those of Cook and King; Cook and King present linguistic analyses of Cherokee verbs whereas I present a practical, pedagogical resource to be used in the classroom. Further research should be done on Cherokee verbs and their stem suffix forms. Additionally, researchers should focus on the instruction of verbs in Cherokee, and whether or not verb classes like mine prove to be helpful in the classroom. This research will shape the future of Cherokee education, normalization, and revitalization.

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